



# Doosan's new excavators are simply the best solution for every dig.

DX225LCA-7M offers you the unbeatable performance in every job site, improved fuel efficiency and customer - oriented convenience.

Doosan's proven electrically controlled pump technology, improved engine and system power, a precise combination of engine and pump power, all of them focused on unbeatable performance while burning less fuel. Convenience features, options, and highly customer focused switch layout in cabin.

Doosan has always committed to increase the optimum return on your investment and maximizing uptime. Raging the bar once again, we are ready to show you all the progress we made.

# Unearth maximum profit when you dig with Doosan

#### **High Productivity**

Improved engine and system power, lifting capacity and market focused attachments, Doosan will take your business to the next level.

#### **Improved Fuel Efficiency**

We proudly introduce Doosan's cutting-edge technology, Electric Pump Control System. Electric Pump Control System combined all the best aspects of existing hydraulic systems. This new system electronically controls the pump, to generate the virtual hydraulic flow. Along with Doosan's unrivalled tuning technique, operator can reduce fuel consumption up to 14% compared to previous model.

#### **Better Quality**

DX225LCA-7M meet the New Quality standard of Doosan. Every key component fulfills the DI single platform verified in global market. Frames and structures armed with robust design to stand whatever lies ahead. All features applied strict criteria into raise the quality to the next level.

#### **Easy Maintenance**

We lowered the entry barrier of maintenance. The mechanical engine, ground accessible filters and simple layout offer easy maintenance to our customer.

Via DoosanCONNECT service, you can always be connected to your vehicles.

DoosanCONNECT offers information including location, operational condition, engine and hydraulic system. You can be informed of the component's operational data in hourly cycle, without the trouble to open up the panel of your excavator.



Full Engine Power and Smart Sustainability

DX225LC-7M is waiting on a starting line, fully geared up with features to let you win. Whether explosive power is needed in your game or whether an agile and fast player is what you are looking for. Even when you are starting a long-distance race, DX225LC-7M is ready to cross the finish line in first place, in every single game.

Proven performance with the extra edge of intelligence. Unparalleled Workload, enhanced speed, first class digging power with even upgraded engine power. Newly added SPC system, autonomously efficiently save fuel without compromising productivity.

Whatever goal you need to reach, get there dependably with your winning team, intelligent and efficient features in full speed and with full power. Cabin designed for total controllability in true safety from the outset. Doosan's competent coaching staffs will offer a tailored solution to help you win more in less time.

DX225LC-7M. Medalist in all the matches, a winning player on every game. All time winner once again be fully readied to raise your game.

### UNPARALLELED PERFORMANCE

DX225LC-7M guarantees the best productivity at all job sites. All of the key components directly contributing to producing power and speed improved. The new engine boasts explosive 129.6KW power which is far more improved than previous model. Superior workload along with increased fuel efficiency. Reducing the size and Narrowing the cylinder's diameter results in speed enhancement for faster working cycle. Maximized digging force backed up with versatility for DX225LC-7M to be used on all rough terrains.

### HOLISTIC VIEW FOR EFFICIENCY

DX225LC-7M brings smart and innovative solutions which serve to both increase efficiency and long-term sustainability. SPC (Smart Power Control) system automatically controls engine RPM to supply proper torque depending on workload and speed to serve best fuel efficiency. Electronical engine which delivers superior power at the same time contributes to reduction of both emissions and fuel consumption. Doosan offers holistic and comprehensive solutions for your economic and environmental sustainability, enabling investments for the future.

### ENHANCING COMFORT WITH UTTER SAFETY

Completely redesigned cabin comfort leads you in a maximum comfort and total control of equipment. To offer more segmented comfort options with ventilation and air conditioning range expanded to meet more various needs. Also safety features newly added including AVM (Around View Monitor) which prevents safety accidents caused by blind spot and seat-belt warning alarm for operator safety

#### **Electric Pump Control System**

- Electronically control the pump by generating virtual hydraulic flow
- Effectively reduce fuel consumption

#### **DoosanCONNECT Telematics Service(Optional)**

- Offering preventive maintenance service based on web data
- Provides an expert level consultation to dealers
- Functions as fleet management tool for the customers

#### **Ergonomically Designed Work Pedal**

- Ergonomically designed Work pedals placed at both ends
- Reducing fatigue and to lessen the load of operator

#### **OPG(Operator Protective Guard)(Optional)**

- Design changed for better visibility

#### **New Look & Enhanced Structure**

 Applied new decal and changed counterweight design. featured with stable and segmented bonnet mounting, reinforced counterweight and track frame.

#### **Fortified Structure**

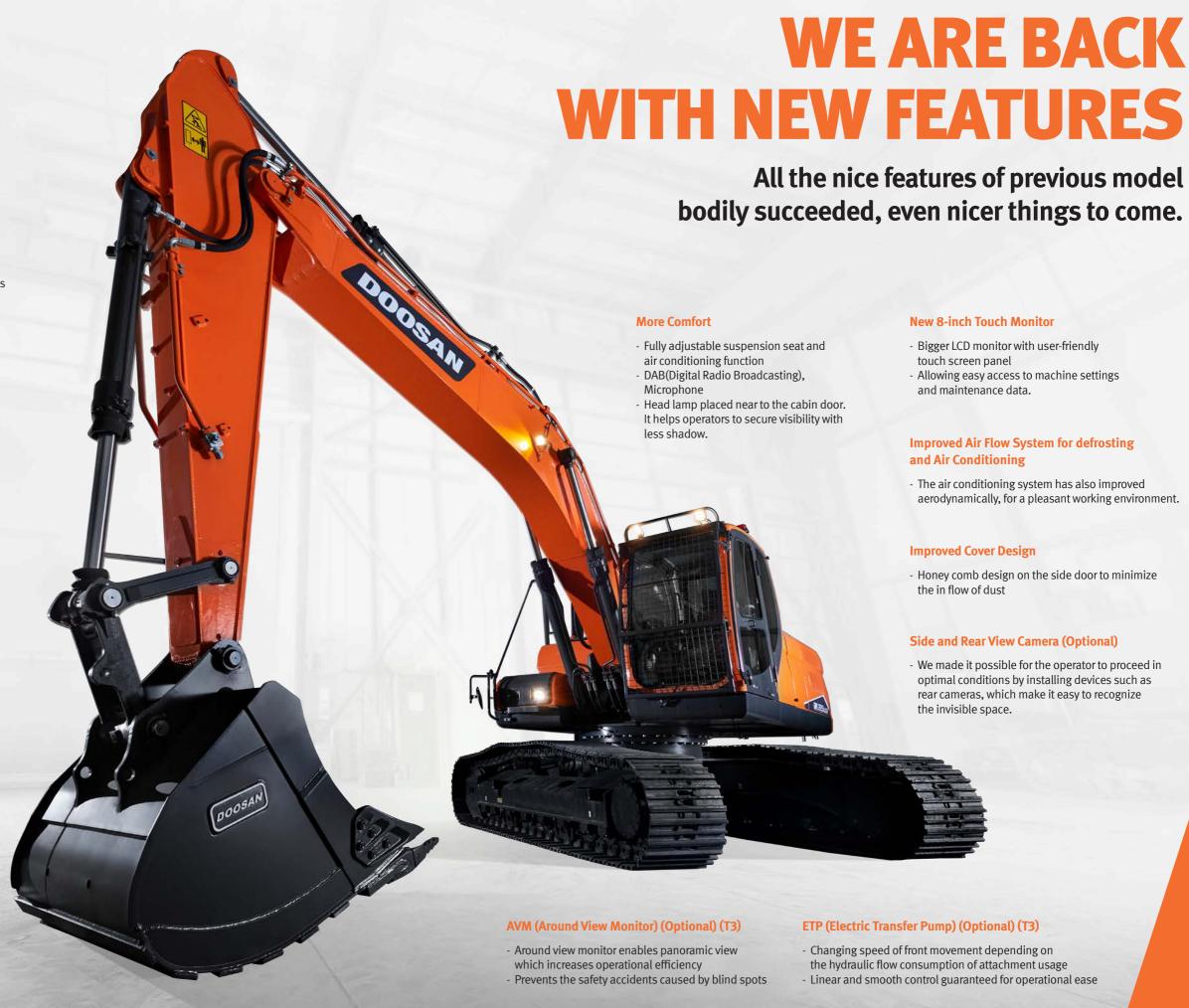
- Reinforced counterweight and track frame
- Stable, segmented Bonnet mounting
- Enhanced corrosive and wear resistance bucket pin link -Y seal

#### **Versatility & Various Attachment**

- Two pump option for high flow attachment.
- New bucket line up: R2H+, R2S+

#### **SPC (Smart Power Control) System (T3)**

 Predictive powertrain control which automatically identifies working mode and adjusts engine RPM to supply proper pump torque Improving fuel consumption up to 5%



\*Option spec info is included to the images contained in this material and may not be the same with the actual specs.

# THE POWER YOU WAITED FOR

# The philosophy of absolute performance, it's your turn to experience

Powerful performance is engraved on its gene. DX225LCA-7M and DX225LC-7M provides superior performance among 22-ton class excavators. It can break- its way -through even in the heaviest loads and the most rugged works. Its enhanced engine power and hydraulic system enable to create an unbeatable power and torque characteristic. Its finest engineering offers surprisingly agile and precise operation but still true to it's root, power. Digging power and lifting capacities can all be optimized through Doosan's unrivalled tuning system. Designed to give you the best possible performance all the time.

#### **DOOSAN ENGINE (DB58TIS)**

Doosan product gives high performance through in-house engine. Doosan engine perfectly harmonized with the hydraulic system and provides strong power. Mechanical engine provides high resistance to moisture, dust, and bad fuel quality. The best engine power in the industry provides stable working speed even in the heavy workload situation.



#### **ELECTRONICALLY CONTROLLED PUMP**

Electronically control the pump by generating virtual hydraulic flow, which effectively works on effectively reduce fuel consumption and high productivity.

#### **SWING DRIVE**

Increased torque is available to ensure rapid cycle, minimizing the shocks during the rotation.

#### TRAVEL DEVIC

In-house travel device provides simple internal structure and increases efficiency of the performance. Thicker sprocket minimizes incoming debris and provides higher durability.

#### **EXCAVATOR CONTROL**

Improved excavator control by new EPOSTM system. Acting as a brain of hydraulic excavator, EPOSTM system have been optimized in association with CAN (Controller Area Network) communication link.

#### **BREAKER ASSIST SWITCH**

Breaker assist switch is equipped for maximum attachment performance. Works for maintaining consistent downward pressure for high productivity. Easily controlled and can vary the speed.

#### ETP (ELECTRIC TRANSFER PUMP) (OPTIONAL)

Electric transfer pump enables to change speed of front movement depending on the hydraulic flow consumption of linked attachment. Upgraded operational ease guarantees linear and smooth movement of attachment. Hydraulic flow can be controlled by the intuitive button or switch.







# BEST IN CLASS EFFICIENCY

# Experience all-time best, with, 20% improved fuel efficiency.

Merely presenting the figures of fuel consumption doesn't give you the full picture of the productivity. Everything from the DX225LCA-7M and DX225LC-7M, the powertrain is engineered to save fuel without sacrificing performance or productivity. To maximize the fuel efficiency, the new DX225LCA-7M introduced the 'Doosan electronic controlled pump – VBO(Virtual Bleed Off) system'- result of technological integration. As a result, up to 14% enhancement compared to previous model. The new DX225LC-7M has also improved up to 20% fuel efficiency thanks to SPC system. From every angle, it can deliver even greater productivity to your business.





#### VBO (Virtual Bleed Off) SYSTEM

VBO system is Doosan's own hydraulic system based on "Doosan electronic controlled pump"

Generally, most excavators use hydraulic system, transferring the energy by using hydraulic flow. In order to facilitate the rapid response to the joystick signal, this hydraulic flow is continuously generated from the pump even when the excavator is not in operation. The weakness of this system is the fuel loss. On the contrary, VBO system 'virtually' generates the hydraulic flow through the electronic sensor. Due to its means, customer can be benefited from VBO system in every way. Not to mention the fuel efficiency and the safe sustenance of the system, but also immediate response and familiar controllability, the strength of existing hydraulic system.



#### **Power Mode**

(P+mode / P mode / S mode / E mode)Four different power modes give you precise control over the excavator's powertrain. The system automatically identifies working mode and adjusts engine RPM to supply proper pump torque. Potential fuel consumption significantly reduced compared to permanently maintaining the same mode. Controlling this technology is intuitive and straightforward. Simple switch allows you to flick easily between modes.



#### SPC (Smart Power control) System (T3)

SPC is a predictive powertrain control system, which automatically identifies working mode and adjusts engine RPM to supply proper pump torque. SPC relieves the driver's workload and contributes to a fuel-efficient working style. Raising the pump torque up to maximize when productivity and power is needed. Lowering the pump torque down to reduce unnecessary fuel consumption when fuel efficiency is needed.

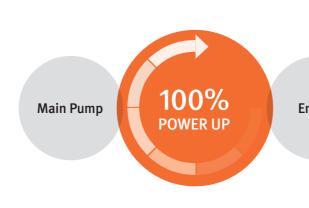


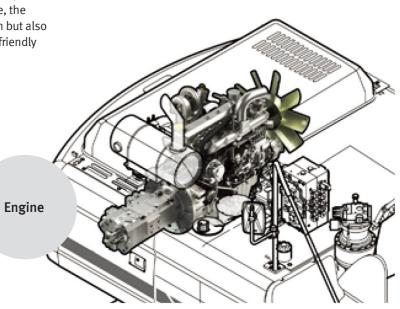


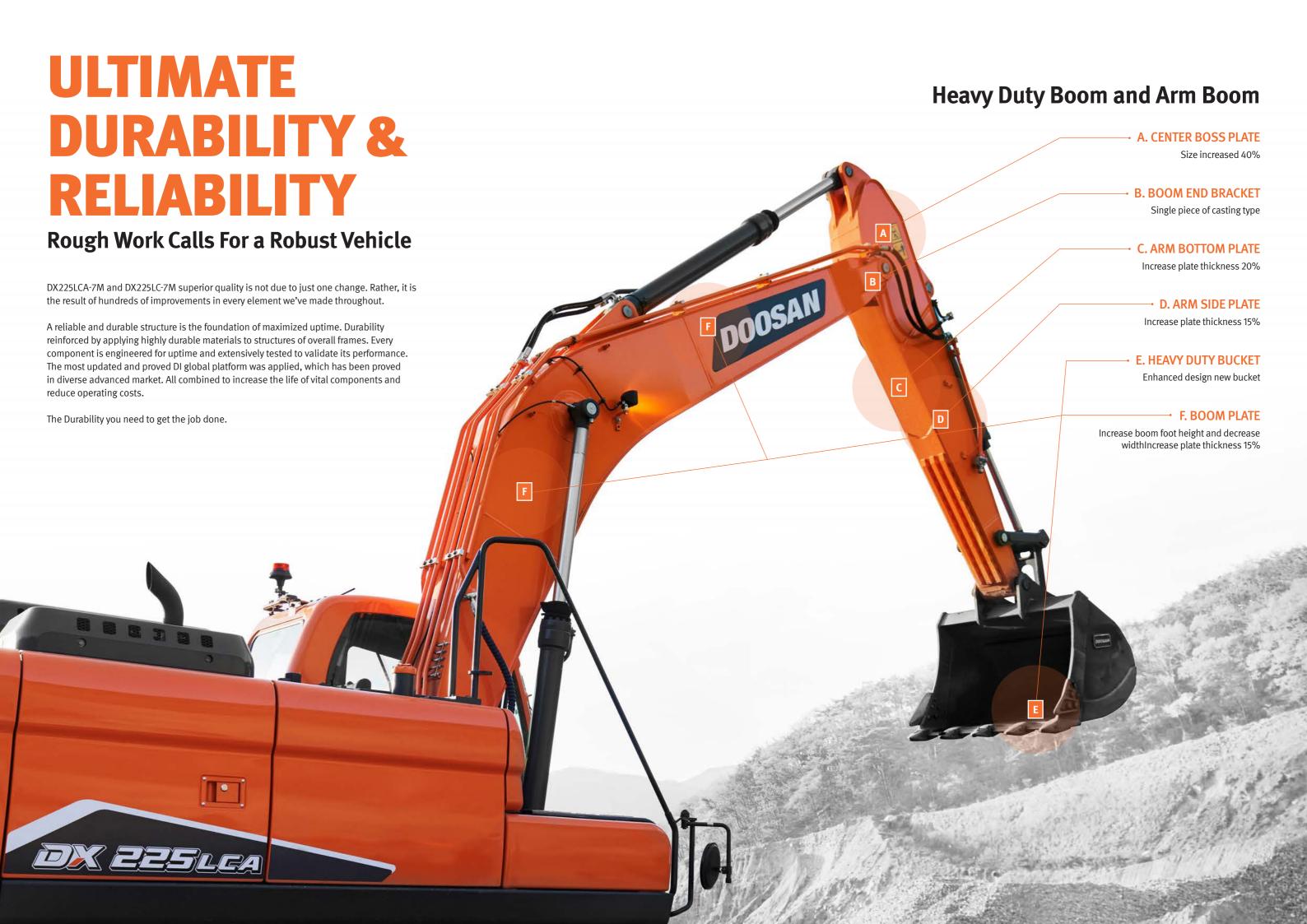


### Pump Matching Technology

'Doosan's engine and pump matching technology' fully uses every drop of fuel to resolve the fuel efficiency problem. By matching the response time between pump and engine, the system not only reduces unnecessary fuel consumption but also controls exhaust fumes. Effectively contributing to eco friendly lifestyle by reducing your carbon footprint.









#### **STABLE, SEGMENTED BONNET**

Mounting Advanced standard counterweight structure to stably control the enlarged bucket. Additional counterweight options supplied for customers who need more tipping load.



#### **IMPROVED ENGINE DURABILITY BY** TECHNOLOGICAL IMPLEMENT

Additional water separator in fuel to prevent engine damage. Large capacity of forced air cleaner also removes over 99% of airborne particles, reducing the risk of engine contamination and lengthen the cartridge change intervals. All improvements of engine components offer a high degree of reliability and an extended service life.



#### STRUCTURE REINFORCEMENT

Strength and stiffness reinforcement through improved welding process and also applying 25 ton class tail frame.





#### TRACK COMPONENT IMPROVEMENT

The chain composed of self – lubricating sealed links, impervious to external contamination. Track frame firmly locked by mechanically bolted pins



#### X- CHASSIS UNDERCARRIAGE

X- chassis undercarriage enables increased ground clearance and improved maneuvering ability. Sloped surface design optimized to shed debris and maximize uptime.



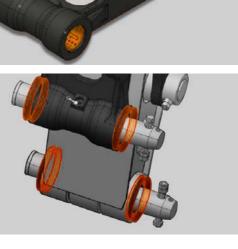
#### LIFTING HOLE

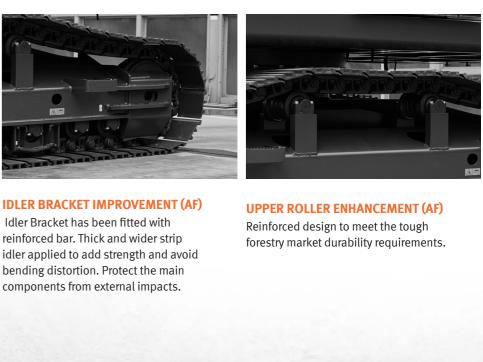
For better and easier work, we've added lifting hole in the front.



#### **ARM END LINK WITH Y-SEAL**

Applied Y-seal to prevent pollutant from bucket connection.









#### DX225LC-7M (T3)



#### HEATING AND COOLING SEAT (OPTIONAL)

The optional, air-suspended, climatized driver's suspension seat provides pleasant seating conditions and a high level of comfort. Equipped with the integral armrests and temperature control device. Heating and cooling temperature range segmented in three stage to meet various customer needs.

#### **SEAT-BELT ALARM**

For enhanced safety and to protect operator in an emergent accident, DX225LC-7M is equipped with seat-belt alarm.



#### AVM (AROUND VIEW MONITOR) (OPTIONAL)

Around View Monitor optimizes the overall view to and makes it easier for the operator to connect up the attachments. The system comprises a front, a rear and an additional all-round camera which can be freely positioned for attached implements. The images can be viewed on a monitor in the interior of the cab. The operator can directly view the area around equipment, when changing implements. Also can have a perfect view of the front structure.

#### DX225LCA-7M (T2)



#### HVAC SYSTEM FILTER COVER (ROPS)

Air ventilation filter and the cover equipped to avoid contamination and system durability. Easy to access for quick and simple maintenance.



#### SIDE AND REAR VIEW CAMERA (OPTIONAL)

Optional side and rear-view camera keep watch in ways beyond operator's sight.
Additional LED lighting system attached on each side for the clear identification.



#### **EMERGENCY STOP SWITCH**

For enhanced safety and to enable fast reactions in an emergency, DX225LCA -7M and DX225LC-7M equipped with an emergency stop switch that allows the interruption of certain body functions whilst allowing the vehicle to remain running.



#### 1. NEW 8-INCH MONITOR

Bigger LCD monitor with user-friendly touch screen panel, allowing easy access to machine settings and maintenance data.



#### 2. ERGONOMICALLY DESIGNED WORK PEDAL

Ergonomically designed Work pedals placed at both ends. Pedal angle adjusted to relieve the pressure on ankle and joints, Reducing fatigue and to lessen the load of operator



#### 3. HEAD LAMP

Head lamp placed near the cabin door which secures operator's visibility by preventing the shadow. This new head lamp system contributes to enhanced safety through improved illumination of the way. Enhances driving comfort and driving safety.



### 4. AIR CONDITIONING AND DEFROSTING SYSTEM (OPTIONAL)

Aerodynamically designed Air conditioner equipped for inner climate control.



#### 5. CONTROL LEVER (OPTIONAL)

Precise control of the equipment increases versatility, safety and facilitates tricky operations requiring great precision. Leveling operations and the movement of lifted load made easier and safer.



#### 6. AIR SUSPENSION SEAT (T3, OPTIONAL)

Equipped with various functions including the adjustment forth and back. Lumbar support effectively reduces the vibration of apparatus during work. Considering the cold environment, seat heating function also equipped in seat

#### 7. ALL ROUND VISIBILITY

Enlarged front shield assures best possible allaround visibility. Panoramic cabin windows and suitable seat position assists on safety and controllability promotion via enhanced lower part of visibility on side position. In crowded city streets or in hazardous construction workplace, operator can get better control and command of surroundings.



<sup>\*</sup> Option spec info is included to the images contained in this material and may not be the same with the actual specs.

# **MAINTENANCE**

## **Easy Maintenance, Start at Once. Smart Maintenance, All by Itself**

Maintain this superior equipment as the way it was. Safe and easy maintenance feature facilitates apparatus to operate in best condition at long intervals. DL225LCA-7M and DX225LC-7M allows Easy access to engine component parts and Short maintenance procedure. Familiar and intuitive. Doosan CONNECT provides you the operational machine data in an hourly cycle. You can even control most functions outside the equipment.



25 LEA

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#### 1. Simple mechanical engine

- In-house mechanical engine with approachable structure
- Engine Bonnet equipped with wide open Side panel

#### 2. Easy access to daily maintenance points

Wide open panels allowing easy access to service points.

- Allowing quick replacement filters and daily maintenance check easier

#### Easily accessible filter located at ground level

Located at Ground level with Wide open side doors

#### Centralized Grease inlets for easy maintenance

- The boom & arm grease inlets are grouped for easy access

#### 3. Large guard rails(option)

- Assuring operator's safety during the work hour
- Easy access / Anti skid

#### 4. DoosanCONNECT(TMS System)

- Maintenance data be directly available from control panel
- Allows daily maintenance check easier









#### Water separator

Highly efficient water separator in fuel to prevent engine damage by removing moisture. Reducing the risk of external engine contamination and lengthen the engine's lifespan.

#### Pre-cleaner

Rotor type dry pre-cleaner attached as a standard option.

#### Centralized grease inlets for easy maintenance

The boom & arm grease inlets are grouped for easy access. Remote grease points make it easier to lubricate hard-to-reach pins on the lift arm and articulation system.



#### **Engine oil filter**

Engine oil filter offers a high level of filtration, lengthen the oil change interval to 500 hours. Positioned in place which is resistant to contamination and impervious in environment condition, but easy to access for filter change.

#### **Easy maintenance on radiators**

Approach to various radiator is easy, making cleaning easier. Engine part accessibility is also enhanced, can be checked through via top and side panels.

#### Hydraulic oil return filter

Glass fiber filter technology filtering out up to 99.5 Percent of impurities, increasing oil change interval.

#### Air cleaner

Air cleaner of large capacity removes 99% of airborne particles, reducing the risk of engine contamination.









#### **Advance at Glance**

#### 1. DAMAGE-PROOFED DURABILITY

Strong foundation to build on. Flexible and robust in operation, the D type frame which shaped to add solidity and X-chassis frame designed using reliable element and formed in optimal structural integrity. Reinforced undercarriage with newly designed track idler, rollers and track guards. Travel motor fortified with bolt head guard. Ensuring long life and high uptime even in extreme terrains

#### 2. PERFORMANCE EXCEL IN FORESTRY

Working in forestry application becomes more stable with its long and large crawler. With impressive ground clearance and superior structure concept, Vibration control due to outstanding torsional flexibility, fully welded frame ensure long service life. Uses highly durable materials and structures tested under extreme conditions.

#### 3. A DESIRABLE WORKPLACE

Comfortable driver's workplace which also serves as an information and command center at the same time. Enjoy your enhanced personal space with completely re-designed cabin interior. Panoramic cabin for the optimal view of the working area. Every feature is intuitive, acceptable, and accessible. Refined interior with enhanced legroom and storage space guarantees a serene ride to you.

# DX220AF-7M A True Forestry Worker, Exceptionally Crafted for Uptime

Head out with fortitude. DX220AF-7M will give you the unmatched confidence to forge through any rough workplaces. It is designed and engineered for exceptional off-road performance. Fully armored from top to down, all improvements help you maximize uptime in all the extreme terrains.

Take full command on all trails. Being supremely capable in demanding situations, DX220AF-7M is ready to overcome any obstacle. Inherited all the performance in its family gene, combined with advanced undercarriage and fortified frame details. Effortless performance on rubble, snow, sand, or unsurfaced road with superior chassis concept which offsets the vibration. Even the trickiest environment can become another chance to show you the exceptional quality and durability of its foundation.

Whatever the surroundings are, inside climate can be maintained perfect. An interface with clear vision and intuitive steering wheel control. A new generation of an impressive display and technology makes your own personal space and at the same time connects you to the world.

More exploring with fewer compromises. Go further and do farther, to the range you ever thought possible, with durable DX220AF-7M.

# **DoosanCONNECT® Telematics Service (OPTIONAL)**

#### **TELECOMMUNICATIONS** Data flow from machine to web



**TELEMATICS SERVICE TERMINAL** 

Telematics Service terminal is installed to machine / connected to EPOS<sup>™</sup>



**TELECOMMUNICATION** 

GPS, EPOS<sup>™</sup> data is sent to sedignated server by GSM, Satellite telecommunication



DOOSAN TELEMATICS SERVICE WEB

Doosan, Dealer, Customer can easily monitor the GPS, EPOS<sup>™</sup> data from Core Telematics Service web

**TELEMATICS SERVICE BENEFITS** Doosan and dealer support customers to improve work efficiency with timely and responsive services

#### CUSTOMER

Improve work efficiency

- · Timely and preventive service
- · Improve operator's skills by comparing work pattern
- · Manage fleet more effectively

#### DEALER

Better service for customers

- · Provide better quality of service
- · Maintain machine value
- · Better understanding of market needs

#### **DOOSAN**

- Responsive to customer's voice
- · Utilize quality-related field data
- · Apply customer's usage profile to deveping new machine

#### FUNCTIONS(WEB/APP) Doosan Telematics Service provides various functions to support your great performance



	FUNCTION	EXCAVATOR	WHEEL LOADER	ADT
GPS	· Location · Geo-fence	All models	All models	All models
Operation hours	· Daily, Weekly, Monthly report	All models	All models	All models
Operation hours	Total operation hours     Operation hours by mode	All models Tier 4 only	All models	All models
Maintenance parts	Preventive maintenance     by item replacement cycle	All models	Tier 4 only	All models
Fault code/ Warning	Fault code     Machine Warnings on Gauge Panel	All models	Tier 4 only	All models
Fuel information	Fuel level     Fuel consumption	All models Tier 4 only	Tier 4 only	All models
Dump capacity	Dump tonnage     Count of Work Cycle	N/A	N/A	All models

## **GLOBAL PARTS NETWORK**

#### **QUALITY-PROVEN MAIN COMPONENTS**

Doosan provides fast and precise worldwide delivery of genuine Doosan parts through its global PDC (parts distribution center) network.





#### **GLOBAL NETWORK**

The global network of the GPDC (Global Parts Distribution Center) maximizes its supply rate by making sure that each center is stockpiled with all the critical parts required for businesses in its area. The network also minimizes the time and costs required for parts delivery by positioning PDCs close to major markets around the world. Doosan PDCs communicate with customers in their time zone, informing them that they are open for operation, and deliver parts to them as early as possible.

#### THE GLOBAL PARTS DISTRIBUTION CENTER NETWORK

PDCs had been set up as shown below, including Mother PDC in Ansan, Korea. The nine other PDCs include one in China (Yantai), Four in USA (Seattle and Atlanta, Suwanee, Miami), two in Europe (Germany and the UK), one in the Middle East (Dubai) and one in Asia (Singapore).



PDC BENEFIT



**Distribution Cost** Reduction



**Maximum Parts** supply rate



time parts delivery

Shortest distance/



Real-time service support



Minimum downtime



# TECHNICAL SPECIFICATION (T2)

#### **ENGINE**

#### Model

Doosan DB58TI

2 valves per cylinder, vertical injectors, water cooled, turbo charged with air to air intercooler. The emission levels are well below the values required for phase II.

#### Number of cylinders

#### Nominal flywheel power

129 KW (174 HP) @ 1,800rpm (SAE J1995, gross) 119 KW (160 HP) @ 1,800rpm (SAE J1349, net)

#### Max torque

70 kgf.m @ 1,400 rpm

#### Piston displacement

5,785 cc (353 cu.in)

#### Bore & stroke

102 mm x 118 mm (4.0" x 4.6")

#### Starter

24 V / 4.5 kW

#### **Batteries**

2 X 12 V / 100 Ah

#### Air cleaner

Double element with auto dust evacuation.

#### **HYDRAULIC CYLINDERS**

The piston rods and cylinder bodies are made of high-strength steel. A shock absorbing mechanism is fitted in all cylinders to ensure shockfree operation and extend piston life.

Cylinders	Quantity	Bore x Rod diameter x stroke
Boom	2	125 x 85 x 1,263 mm
Arm	1	140 x 100 x 1,443 mm
Bucket	1	120 x 80 x 1,060 mm

#### **HYDRAULIC SYSTEM**

The heart of the system is the EPOSTM (Electronic Power Optimizing System). It allows the efficiency of the system to be optimized for all working conditions and minimizes fuel consumption.

- The hydraulic system enables independent or combined operations.
- Two travel speeds offer either increased torque or high speed
- Cross-sensing pump system for fuel savings.
- Auto deceleration system.
- Two operating modes, two power modes.
- Button control of flow in auxiliary equipment circuits.
- Computer-aided pump power control.

#### Main pumps

2 variable displacement axial piston pumps Max flow: 2 x 222.3 l/min

#### Pilot pump

Gear pump - max flow: 27 l/min

#### Maximum system pressure

Boom/arm/Bucket: Normal mode: 350 kgf/cm2 Power mode: 350 kgf/cm2 Travel: 370 kgf/cm2 Swing: 270 kgf/cm2

#### **SWING MECHANISM**

- An axial piston motor with two-stage planetary reduction gear is used for the swing.
- Increased swing torque reduces swing time.
- Internal induction-hardened gear.
- Internal gear and pinion immersed in lubricant bath.
- The swing brake for parking is activated by spring and released hydraulically.

#### Swing speed: 0 to 11.4 rpm

#### WEIGHT

Boom 5,700 mm (18'8") Arm 2,900 mm (9'6") Bucket SAE H Class 0.92 m<sup>3</sup> (1.20 yd<sup>3</sup>)

	Shoe width	Operating weight	Ground pressure (kgf/cm²)
Triple Grouser	(Std) 600 mm (2')	21,700 kg (47,840 lb)	0.46 kgf/cm <sup>2</sup>
	700 mm (2' 4")	21,700 kg (47,840 lb)	0.46 kgf/cm²
	800 mm (2' 8")	22,300 kg (49,163 lb)	0.36 kgf/cm <sup>2</sup>

#### **UNDERCARRIAGE**

Chassis are of very robust construction, all welded structures are designed to limit stresses. High-quality material used for durability. Lateral chassis welded and rigidly attached to the undercarriage. Track rollers lubricated for life, idlers and sprockets fitted with floating seals.

Tracks shoes made of induction-hardened alloy with double grouser. Heat-treated connecting pins. Hydraulic track adjuster with shock-absorbing tension mechanism.

#### Number of rollers and track shoes per side

Upper rollers: 2 (standard shoes)

Lower rollers: 8 Shoes: 49

Total length of track: 4,445 mm (14'7")

#### **DRIVE**

Each track is driven by an independent axial piston motor through a planetary reduction gearbox.

Two levers with control pedals guarantee smooth travel with counterrotation on demand.

#### Travel speed (fast/slow)

6.5 / 3.5 km/h (4.0 / 2.2 mph)

#### Maximum traction force

10,300 / 22,500 kgf (22,708 / 49,604 lbf)

#### Maximum grade

35 (70%)

#### **ENVIRONMENT**

Noise levels comply with environmental regulations (dynamic values).

#### Sound level guarantee

106 DB (A) (2000/14/EC)

#### Cab sound level

75 DB (A) (ISO 6396)

#### **REFILL CAPACITIES**

#### Fuel tank

400 L (105.7 US gal)

#### Cooling system (Radiator capacity)

28.4 L (7.5 US gal)

#### Engine oil

28 L (7.4 US gal)

#### Swing drive

5 L (1.32 US gal)

#### Final drive

(each =Travel Device = travel motor + travel reduction gear)

2 X 4 L (2 X 1.06 US gal)

#### Hydraulic tank

196 L (51.8 US gal)

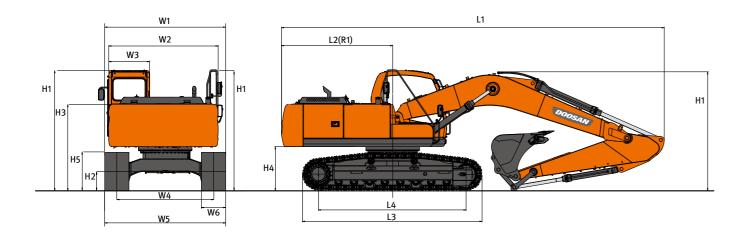
#### **BUCKET**

					C/W (ton)		4.1		5.3
					SHOE (mm)		600		600
Duralisat Tima	Capaci	ty (m³)	Width	(mm)	Width (Ica)		5.7m Boom		SLR (8.5m)
Bucket Type	SAE/PCSA	CECE	W/O Cutter	With Cutter	Width (kg)	2.4m HD Arm	2.9m HD Arm	3.5m Arm	SLR (6.2m)
	0.39	0.35	825	736	345	-	-	-	А
	0.35	0.47	768	722	549	Α	Α	А	-
GP	0.81	0.72	1,125	1,065	684	А	A	А	-
	0.92	0.81	1,233	1,173	724	Α	А	А	-
	1.05	0.92	1,369	1,309	776	Α	В	В	-
	0.92	0.81	1,198	1,264	766	А	А	В	-
R1H	1.05	0.92	1,331	1,397	821	А	В	С	-
	1.17	1.10	1,453	1,519	886	В	С	С	-
DC	0.54	0.46	1,800	-	358	-	-	-	С
R1S	1.05	0.92	1,331	1,397	990	А	В	С	-
	0.92	0.83	1,050	1.096	867	А	А	В	-
R2H	1.08	0.97	1,200	1,246	939	Α	В	С	-
	1.24	1.11	1,350	1,369	1,011	В	С	D	-
R2H+	1.08	0.97	1,200	1,246	1,033	В	С	С	-
nac	0.91	0.82	1,050	1,094	1,078	А	В	С	-
R2S	1.07	0.96	1,200	1,244	1,182	В	С	D	-
	Ma	ximum load pir	n-on(payload+bu	icket)		3242	2953	2683	1311

Based on ISO 10567 and SAE J296, arm length without quick change clamp A: Suitable for materials with density of 2100kg/m (3500lb/yd ) or less B: Suitable for materials with density of 1800kg/m (3000lb/yd ) or less

- C: Suitable for materials with density of 1500kg/m (2500lb/vd ) or less
- D: Suitable for materials with density of 1200kg/m (2000lb/yd ) or less

# **DIMENSIONS** (T2)

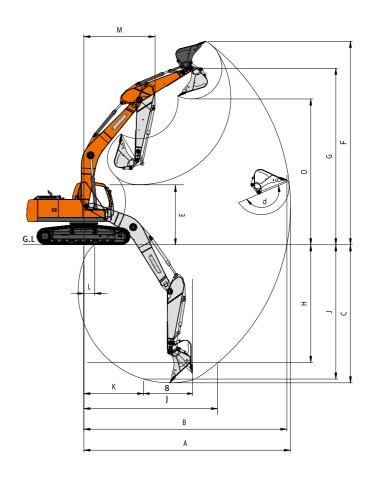


#### **DIMENSIONS**

		Model				DX200	DA-7M	
		Dimension			STD	OPT1	OPT2	OPT3
	Boom				5,700	57,00	5,700	8,500
		Arm		mm	2,900	2,400	3,500	6,200
		Bucket (PCSA)		m³	0.92	1.05	0.81	0.39
	U	ndercarriage (Track+Gr	ouser)	mm	LC+TG	LC+TG	LC+TG	LC+TG
	L1	Overall	Length	mm	9,505	9,545	9,530	12,330
			Boom	mm	2,860	2,960	3,209	3,306
	H1	Overall Height	Hose	mm	3,005	3,125	3,394	3,382
rall	n1		Cabin	mm	2,953	2,953	2,953	2,953
Overall			Hand/Guard Rail	mm	2,992	2,992	2,992	2,992
	W1	Overall Width		mm	2,990	2,990	2,990	2,990
	R1	Rear Swii	mm	2,840	2,840	2,840	2,840	
	H2	Ground C	learance*	mm	*450.5	*450.5	*450.5	*450.5
<u>&gt;</u>	W2	House	mm	2,710	2,710	2,710	2,710	
Swing Body	W3	Cabin	mm	1,010	1,010	1,010	1,010	
wing	Н3	Height O	ver Cover	mm	2,113	2,113	2,113	2,113
	H4	Counterweig	ht Clearance*	mm	*1,066	*1,066	*1,066	*1,066
	H5	Track F	leight*	mm	*883	*883	*883	*883
g e	L3	Track I	Length	mm	4,446	4,446	4,446	4,446
arria	L4	Tumbler	Distance	mm	3,650	3,650	3,650	3,650
Undercarriage	W5	Undercarriage Width	STD	mm	2,990	2,990	2,990	2,990
'n	W6	Shoe	Width	mm	600	600	600	600
		Grouse	r Height	mm	26	26	26	26

<sup>\*</sup>Grouser 미포함

# **WORKING RANGES (T2)**



#### **WORKING RANGE**

BOOM LENGTH	mm		5,700		8,500
ARM TYPE	mm	2,900	(Std.) 2,400	3,500	6,200
BUCKET TYPE (SAE / PCSA)	m³	0.92	(Std.) 1.05	0.81	0.39
A MAX. DIGGING REACH	mm	9,865	9,460	10,385	15,365
B MAX. DIGGING REACH (GROUND)	mm	9,695	9,280	10,220	15,255
C MAX. DIGGING DEPTH	mm	6,590	6,105	7,210	11,660
D MAX. DUMPING HEIGHT	mm	6,830	6,675	6,960	10,830
E MIN. DUMPING HEIGHT	mm	2,500	2,985	1,870	2,015
F MAX. DIGGING HEIGHT	mm	9,620	9,425	9,635	13,045
G MAX. BUCKET PIN HEIGHT	mm	8,270	8,130	8,415	12,050
H MAX. VERTICAL WALL DEPTH	mm	5,525	5,385	5,995	9,715
I MAX. RADIUS VERTICAL	mm	6,415	6,025	6,740	10,060
J MAX. DIGGING DEPTH(8'LEVEL)	mm	6,395	5,890	7,030	11,555
K MIN. RADIUS 8' LINE	mm	2,820	2,840	2,790	4,815
L MIN. DIGGING REACH	mm	575	1,690	-225	150
M MIN. SWING RADIUS	mm	3,560	3,575	3,615	4,970
D. BUCKET ANGLE (DEG)	0	177	177	177	177

# **STANDARD & OPTION (T2)**

#### STANDARD EOUIPMENT

#### Boom & Arm

- 5.7m Boom (Heavy duty)
- 2.9m Arm (Heavy duty)

#### Hydraulic system

- Boom and arm flow regeneration
- Boom and arm holding valves
- Swing anti-rebound valves
- Spare ports (Control valve)
- One-touch power boost

#### Cabin & Interior

- Viscous cab mounts
- All weather sound suppressed type cab
- Air conditioner & Heater
- Adjustable suspension seat with head rest and adjustable arm rest
- Pull-up type front window and removable lower front window
- Room light
- Intermittent windshield wiper
- Cup holder
- Hot & Cool box
- LCD color monitor panel
- E/G RPM control dial
- AM/FM radio + MP3 (USB) • Remote radio ON/OFF switch
- 12V,24V power socket
- Serial communication port for laptop PC interface
- Joystick lever with 3 switches

#### Safety

- Large handrails and step
- Convex metal anti-slip plates
- Seat belt
- Hydraulic safety lock lever
- Safety glass
- Hammer for emergency escape
- Right and left rearview mirrors
- Travel alarm
- Battery protector cover (option)

#### Others

- Double element air cleaner
- Additional water separator
- Dry type pre cleaner
- Fuel filter
- Dust screen for radiator/oil cooler
- Engine overheat prevention system
- Engine restart prevention system
- Self-diagnostic system
- 60A Alternator (24V, 50 amps)
- Electric horn
- Halogen working lights (frame mounted 1, boom mounted 2)
- Hydraulic track adjuster
- Track guards
- Greased and sealed track link
- Hydraulic oil tank air breather filter
- Long & Fixed track

#### **OPTIONAL EQUIPMENT**

Some of optional equipments may be standard in some markets. Some of this optional equipment is not available in some markets. You must check with the local DOOSAN dealer to know about the availability or to release the adaptation following the needs of the applications

#### Boom & Arm

- 5.7m Boom
- 8.5m Boom
- 2.4m Arm (Heavy duty)
- 2.9m Arm
- 3.5m Arm
- 6.2m Arm

#### Safety

- Boom and arm hose rupture protection valve
- Overload warning device
- Cabin Top/Front guard (ISO 10262, FOGS standard)
- Travel & swing alarm
- Rotating
- Rear lamp for number plate

#### Cabin & Interior

- Air suspension seat
- Rain Shield
- High seat Mount
- Breaker pedal
- ROPS/FOGS Cabin
- Cabin front guard (Upper and lower guard)
- Steel roof cover
- Additional mirror

#### Others

- Piping option
- Piping for Crusher
- Piping for Breaker
- Piping for Quick clamp
- 700mm / 800mm / 900mm shoe
- Lower wiper
- 60A/80A alternator
- Fuel filler pump
- Working Lights
- 4-front / 2-rear on cabin
- 2-front on cabin
- 1 on counterweight
- Counterweight (3.8 Ton / 5.3 Ton)
- Hydraulic Oil
- Cold weather (VG32)
- Normal (VG46)
- Tropical weather (VG68) • Breaker filter
- Water separator with heater
- Heavy duty under cover
- Short & Fixed track • Heavy duty & Fixed track

# TECHNICAL SPECIFICATION (T3)

#### **ENGINE**

#### Model

Doosan DB58TI

2 valves per cylinder, vertical injectors, water cooled, turbo charged with air to air intercooler. The emission levels are well below the values required for phase II.

#### Number of cylinders

6

#### Nominal flywheel power

126.5 KW (170 HP) @ 2,000rpm (SAE J1995, gross) 116 KW (155 HP) @ 2,000rpm (SAE J1349, net)

#### Max torque

70 kgf.m @ 1,400 rpm

#### Piston displacement

5,785 cc (353 cu.in)

#### Bore & stroke

102 mm x 118 mm (4.0" x 4.6")

#### Starter

24 V / 4.5 kW

#### **Batteries**

2 X 12 V / 100 Ah

#### Air cleaner

Double element with auto dust evacuation.

#### **HYDRAULIC CYLINDERS**

The piston rods and cylinder bodies are made of high-strength steel. A shock absorbing mechanism is fitted in all cylinders to ensure shockfree operation and extend piston life.

Cylinders	Quantity	Bore x Rod diameter x stroke
Boom	2	120 x 85 x 1,263 mm
Arm	1	135 x 95 x 1 <b>,</b> 443 mm
Bucket	1	120 x 80 x 1,060 mm

#### HYDRAULIC SYSTEM

The heart of the system is the EPOSTM (Electronic Power Optimizing System). It allows the efficiency of the system to be optimized for all working conditions and minimizes fuel consumption.

- The hydraulic system enables independent or combined operations.
- Two travel speeds offer either increased torque or high speed tracking.
- Cross-sensing pump system for fuel savings.
- Auto deceleration system.
- Two operating modes, two power modes.
- Button control of flow in auxiliary equipment circuits.
- Computer-aided pump power control.

#### Main pumps

2 variable displacement axial piston pumps Max flow: 2 x 222.3 l/min

#### Pilot pump

Gear pump - max flow: 27 l/min

#### Maximum system pressure

Boom/arm/Bucket: Normal mode: 350 kgf/cm2 Power mode: 350 kgf/cm2 Travel: 370 kgf/cm2 Swing: 270 kgf/cm2

#### **SWING MECHANISM**

- An axial piston motor with two-stage planetary reduction gear is used for the swing.
- $\bullet$  Increased swing torque reduces swing time.
- Internal induction-hardened gear.
- Internal gear and pinion immersed in lubricant bath.
- The swing brake for parking is activated by spring and released hydraulically.

Swing speed: 0 to 11.4 rpm

#### **WEIGHT**

Boom 5,700 mm (18'8") Arm 2,900 mm (9'6") Bucket SAE H Class 0.92 m<sup>3</sup> (1.20 yd<sup>3</sup>)

	Shoe width	Operating weight	Ground pressure (kgf/cm²)
Triple Grouser	(Std) 600 mm (2')	21,700 kg (47,840 lb)	0.46 kgf/cm <sup>2</sup>
	700 mm (2' 4")	21,700 kg (47,840 lb)	0.46 kgf/cm <sup>2</sup>
	800 mm (2' 8")	22,300 kg (49,163 lb)	0.36 kgf/cm <sup>2</sup>

#### **UNDERCARRIAGE**

Chassis are of very robust construction, all welded structures are designed to limit stresses. High-quality material used for durability. Lateral chassis welded and rigidly attached to the undercarriage. Track rollers lubricated for life, idlers and sprockets fitted with floating seals.

Tracks shoes made of induction-hardened alloy with double grouser. Heat-treated connecting pins. Hydraulic track adjuster with shock-absorbing tension mechanism.

#### Number of rollers and track shoes per side

Upper rollers: 2 (standard shoes)

Lower rollers: 8 Shoes: 49

Total length of track: 4,445 mm (14'7")

#### **DRIVE**

Each track is driven by an independent axial piston motor through a planetary reduction gearbox.

Two levers with control pedals guarantee smooth travel with counterrotation on demand.

#### Travel speed (fast/slow)

6.5 / 3.5 km/h (4.0 / 2.2 mph)

#### Maximum traction force

10,300 / 22,500 kgf (22,708 / 49,604 lbf)

#### Maximum grade

35 (70%)

#### **ENVIRONMENT**

Noise levels comply with environmental regulations (dynamic values).

#### Sound level guarantee

106 DB (A) (2000/14/EC)

#### Cab sound level

75 DB (A) (ISO 6396)

#### REFILL CAPACITIES

#### Fuel tank

400 L (105.7 US gal)

#### Cooling system (Radiator capacity)

28.4 L (7.5 US gal)

#### Engine oil

28 L (7.4 US gal)

#### Swing drive

5 L (1.32 US gal)

#### Final drive

(each =Travel Device = travel motor + travel reduction gear)

2 X 4 L (2 X 1.06 US gal)

#### Hydraulic tank

196 L (51.8 US gal)

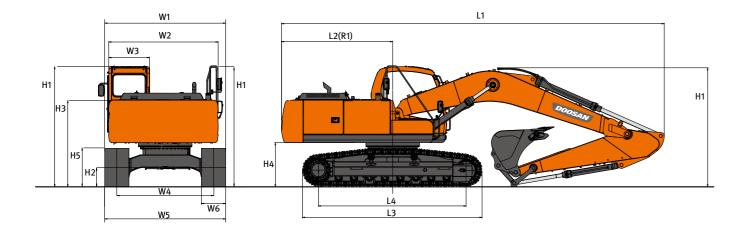
#### **BUCKET**

					C/W (ton)		4.1		5.3
					SHOE (mm)		600		600
Duralisat Tima	Capaci	ty (m³)	Width	(mm)	Width (Ica)		5.7m Boom		SLR (8.5m)
Bucket Type	SAE/PCSA	CECE	W/O Cutter	With Cutter	Width (kg)	2.4m HD Arm	2.9m HD Arm	3.5m Arm	SLR (6.2m)
	0.39	0.35	825	736	345	-	-	-	А
	0.35	0.47	768	722	549	Α	А	А	-
GP	0.81	0.72	1,125	1,065	684	А	А	А	-
	0.92	0.81	1,233	1,173	724	Α	А	А	-
	1.05	0.92	1,369	1,309	776	Α	В	В	-
	0.92	0.80	1,198	1,264	740	А	А	А	-
R1H	1.05	0.90	1,331	1,397	787	А	В	В	-
	1.17	1.03	1,453	1,519	848	В	С	С	-
DC	0.54	0.46	1,800	-	358	-	-	-	С
R1S	1.05	0.92	1,331	1,397	990	А	В	С	-
	0.92	0.83	1,050	1.096	867	А	А	В	-
R2H	1.08	0.97	1,200	1,246	939	Α	В	С	-
	1.24	1.11	1,350	1,369	1,011	В	С	D	-
R2H+	1.08	0.97	1,200	1,246	1,033	В	С	С	-
DOC	0.91	0.82	1,050	1,094	1,078	Α	В	С	-
R2S	1.07	0.96	1,200	1,244	1,182	В	С	D	-
	Ma	ximum load pir	n-on(payload+bu	icket)		3242	2953	2683	1311

Based on ISO 10567 and SAE J296, arm length without quick change clamp A: Suitable for materials with density of 2100kg/m (3500lb/yd ) or less B: Suitable for materials with density of 1800kg/m (3000lb/yd ) or less

- C: Suitable for materials with density of 1500kg/m (2500lb/yd) or less
- D : Suitable for materials with density of 1200kg/m (2000lb/yd ) or less
- X: Not recommended

# **DIMENSIONS** (T3)

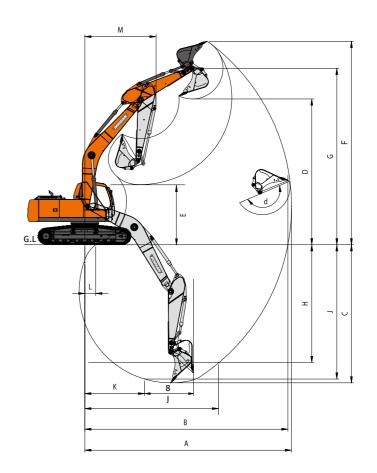


#### **DIMENSIONS**

Model				DX225LCA				
Dimension			STD	OPT1	OPT2	ОРТ3		
	Boom			5.7HD	5.7HD	5.7	8.5	
		Arm		2.9HD	2.4HD	3.5	6.2	
		Bucket		0.92	1.08	0.81	0.39	
	U	ndercarriage (Track+Gı	rouser)	LC+TG	LC+TG	LC+TG	LC+TG	
	L1	Overall	Length	9,570	9,600	9,610	12,390	
	L1'	Overall Leng	gth w/o Front	5,061	5,061	5,061	5,061	
			Boom	2,890	2,940	3,110	3,295	
	H1	Overall Height	Hose	3,005	3,105	3,305	3,385	
all	"'		Cabin	2,980	2,980	2,980	2,980	
Overall			Hand/Guard Rail	3,175	3,175	3,175	3,175	
	W1	Overall Width		2,990	2,990	2,990	2,990	
	R1	Rear Swing Radius		2,909	2,909	2,909	2,909	
	H2	Ground C	learance*	*450.5	*450.5	*450.5	*450.5	
	W2	House	Width	2,710	2,710	2,710	2,710	
λpα	W3	Cabin	Width	1,010	1,010	1,010	1,010	
Swing Body	Н3	Height O	Height Over Cover		2,140	2,140	2,140	
Swir	H4	Counterweig	ht Clearance*	*1,066	*1,066	*1,066	*1,066	
	H5	Track I	leight*	*883	*883	*883	*883	
	L3	Track	Length	4,445	4,445	4,445	4,445	
e.	L4	Tumbler	Distance	3,650	3,650	3,650	3,650	
Undercarriage	W4	Track Gauge		2,390	2,390	2,390	2,390	
derca	W5	Undercarriage Width	STD/LC	2,990	2,990	3,190	3,190	
Ωnc	W6	Shoe	Width	600	600	800	800	
	etc.	Grouse	r Height	26	26	26	26	

<sup>\*</sup>Grouser 미포함

# **WORKING RANGES (T3)**



#### **WORKING RANGE**

BOOM LENGTH	mm 5,700				8,500
ARM TYPE	mm	2,900	(Std.) 2,400	3,500	6,200
BUCKET TYPE (SAE / PCSA)	m³	0.92	(Std.) 1.05	0.81	0.39
A MAX. DIGGING REACH	mm	9,865	9,460	10,385	15,365
B MAX. DIGGING REACH (GROUND)	mm	9,695	9,280	10,220	15,255
C MAX. DIGGING DEPTH	mm	6,590	6,105	7,210	11,660
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J MAX. DIGGING DEPTH(8'LEVEL)	mm	6,395	5,890	7,030	11,555
K MIN. RADIUS 8' LINE	mm	2,820	2,840	2,790	4,815
L MIN. DIGGING REACH	mm	575	1,690	-225	150
M MIN. SWING RADIUS	mm	3,560	3,575	3,615	4,970
D. BUCKET ANGLE (DEG)	0	177	177	177	177

# **STANDARD & OPTION (T3)**

#### STANDARD EQUIPMENT

#### Boom & Arm

- 5.7m Boom (Heavy duty)
- 2.9m Arm (Heavy duty)

#### Hydraulic system

- Boom and arm flow regeneration
- Boom and arm holding valves
- Swing anti-rebound valves
- Spare ports (Control valve)
- One-touch power boost

#### Cabin & Interior

- Viscous cab mounts
- All weather sound suppressed type cab
- Air conditioner & Heater
- Adjustable suspension seat with head rest and adjustable arm rest
- Pull-up type front window and removable lower front window
- Room light
- Intermittent windshield wiper
- Cup holder
- Hot & Cool box
- LCD color monitor panel
- E/G RPM control dial
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- Serial communication port for laptop PC interface
- Joystick lever with 3 switches

#### Safety

- Large handrails and step
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- Seat belt
- Hydraulic safety lock lever
- Safety glass
- Hammer for emergency escape
- Right and left rearview mirrors
- Travel alarm
- Battery protector cover (option)

#### Others

- Double element air cleaner
- Additional water separator
- Dry type pre cleaner
- Fuel filter
- Dust screen for radiator/oil cooler
- Engine overheat prevention system
- Engine restart prevention system
- Self-diagnostic system
- 60A Alternator (24V, 50 amps)
- Electric horn
- Halogen working lights (frame mounted 1, boom mounted 2)
- Hydraulic track adjuster
- Track guards
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- Hydraulic oil tank air breather filter
- Long & Fixed track

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#### Boom & Arm

- 5.7m Boom
- 8.5m Boom
- 2.4m Arm (Heavy duty)
- 2.9m Arm
- 3.5m Arm
- 6.2m Arm

#### Safety

- Boom and arm hose rupture protection valve
- Overload warning device
- Cabin Top/Front guard (ISO 10262, FOGS standard)
- Travel & swing alarm
- Rotating
- Rear lamp for number plate

#### Cabin & Interior

- Air suspension seat
- Rain Shield
- High seat Mount
- Breaker pedal
- ROPS/FOGS Cabin
- Cabin front guard (Upper and lower guard)
- Steel roof cover
- Additional mirror

#### Others

- Piping option
- Piping for Crusher
- Piping for Breaker
- Fibilig for breaker
- Piping for Quick clamp- 700mm / 800mm / 900mm shoe
- Lower wiper
- 60A/80A alternator
- Fuel filler pump
- Working Lights
- 4-front / 2-rear on cabin
- 2-front on cabin
- 1 on counterweight
- Counterweight (3.8 Ton / 5.3 Ton)
- Hydraulic Oil
- Cold weather (VG32)
- Normal (VG46)
- Tropical weather (VG68)

   Breaker filter
- Water separator with heater
- Heavy duty under cover
- Short & Fixed trackHeavy duty & Fixed track