

## **Amphibious Excavator**

**DX225 AM** 





# NEWLY ADDED FEATURE



#### **7 INCH MONITOR**

- New, user-friendly LCD color monitor with full access to machine settings and maintenance data.
- Rear camera(optional) and large side mirrors enhance operator's visibility.



#### **TROPICAL HYDRAULIC OIL (ISO VG 68)**

- Maintain best performance by keeping optimum viscosity in tropical region.



- arm and boom to withstand high-impact materials.
- To better protect the base of the arm, reinforced bars have been added and the arm center and end boss have been strengthened.



#### **ROPS CERTIFIED CABIN (OPTIONAL)**

- One of the most spacious cabs in the market, with low noise & vibration levels and excellent all-round visibility.
- Fully adjustable suspension seat, air conditioning with climate control as standard.



- Rotor type dry pre-cleaner an standard (Donaldson Top Spin 5")
- Separate more than 99% of particles of 20 micron and above particles.



#### WATER SEPARATOR

- Large capacity of additional fuel water separator filters water in fuel and enhance engine's durability.





#### **ADVANCED UNDERCARRIAGE**

Strengthen Sprocket structure and tooth - Structure to minimize incoming debris



#### ADVANCED FRONT BUSH

- EM bushing (Enhanced Macro-surface)
- Pocket & Dimple surface pattern : Optimized greasing & Trap foreign object
- Wear resistant solid lubricant coating : Noise free & enhanced anti-seizure property
- 30% longer life time than steel bush



#### **ADVANCED H-CLASS BUCKET**

- Doosan new H-class bucket designed for higher productivity.
- Newly designed side cutter and abrasion resistant steel increase bucket solidity.



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

## PERFORMANCE & PRODUCTIVITY

Performance is what it's all about; Doosan delivers what you need and then some. For decades, Doosan machines have proven themselves on thousands of jobsites around the world. Our long carriage (LC) design provides superior stability and optimizes working width for superior performance in heavy digging and lifting operations. Powerful hydraulic, arm and bucket forces – with horsepower to spare – help you get the job done quickly and efficiently.



#### **DOOSAN ENGINE (DL06)**

At the heart of the hydraulic excavator is the new "Common Rail" DOOSAN DL06 engine.

It is combined with the new e-EPOS electronic control system, for optimum power and fuel saving.

The new engine produces 172 hp at only 2,000 rpm, and more torque, due to its careful design combined with the ues of common rail injection and 4 valves per cylinder. These features help optimize combustion and minimize pollution through reduced Nox & particulate emissions.

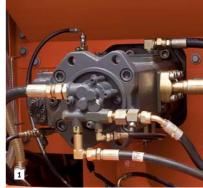
Increased torque allows efficient use of the power of the hydraulic system.

Faster working cycles increase productivity. Increased torque means the excavator is able to move more easily.

Energy efficiency reduces fuel consumption

- Faster working cycles increase productivity.
- Increased torque means the excavator is able to move more easily.
- Energy efficiency reduces fuel consumption.









#### **11** HYDRAULIC PUMP

The Main pump has a capacity of 2x206.5l/min reducing cycle time while a high capacity gear pump improves pilot line efficiency.

#### **2 SWING DRIVE**

Shocks during rotation are minimized, while increased torque is available to ensure faster working cycles.

#### **II TRAVEL DEVICE**

In house travel device provides simple internal structure and increases efficiency of the performance.

Thicker sprocket minimizes incoming debris and provides higher durability.

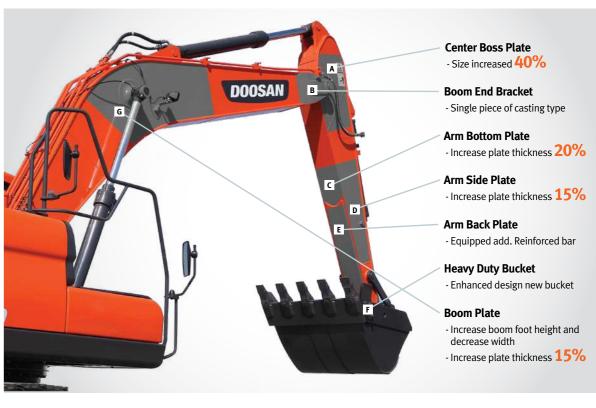
#### **EXCAVATOR CONTROL**

Improved Excavator control by New EPOS™ system The brains of the hydraulic excavator, the EPOS™ (Electronic Power Optimizing system), have been improved, through a CAN (Controller Area Network) communication link, these units are now perfectly synchronised.

# DURABILITY & RELIABILITY

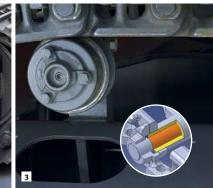


#### **HEAVY DUTY BOOM & ARM BOOM AS STANDARD**









### ■ ADVANCED PIN-BUSH AND DISK / SHIM TECHNOLOGY

Pocket & Dimple surface pattern : Optimized greasing & Trap foreign object

- Wear resistant solid lubricant coating:
   Noise free & enhanced anti-seizureproperty.
- Ultra-hard wear-resistant disc : Increase the wear resistance and the service intervals.

#### **■ INTEGRATED TRACK SPRING AND IDLER**

The track spring and the idler have been joined directly to achieve high durability and improved maintenance convenience.

#### **TRACKS**

The chain is composed of self-lubricating sealed links isolated from all external contamination. The tracks are locked by mechanically bolted pins.

#### **HEAVY DUTY & FIXED TRACK (OPTIONAL)**

- 1. Idler Bracket
- Thick & Wide strip to avoid bracket bending
- 2. Track Under Cover Plate
- Reinforced track under cover  $(3.2T \rightarrow 4.5T)$
- Reinforced mounting
- 3. Track Motor Cover
- (Out) Add bolt head guard
- (In) Reinforced motor cover mounting bolt using steel rib

# **\$ FUEL EFFICIENCY**



#### **RELIEF CUTOFF**

The pump continues to supply flow even when the maximum pressure on the system is reached due to severe working environments and large workloads. Relief cutoff technology of DX225LC prevents transfer of unnecessary flow to maintain powerful working level at the maximum value while reducing consumption of fuel.



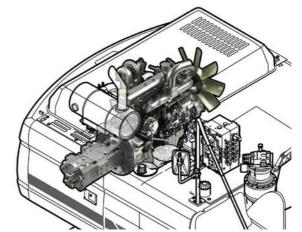
### OPTIMIZED LEVER CONTROL & AUTO IDLE

When operator takes a break and leaves the control joystick fixed, both of the engine and the pump are kept in standby mode and prevents unnecessary fuel consumption.





#### **PUMP MATCHING TECHNOLOGY**



Engine & pump matching, the new technology of Doosan, fully resolves problems; low respones time of the system, unnecessary fuel consumption. Matching response time between pump and engine efficiently reduces unnecessary fuel consumption as well as exhaust fumes.



# **OPERATOR COMFORT**



#### **MONITOR**



- 3 power modes for maximum efficiency
- Power mode
- Standand mode
- Economy mode
- 3 work modes to suit your application
- 1-way mode
- 2-way mode
- Digging mode

- Control panel
- Navigation modes
  - Rearview camera, Display selector
- Working modes
  - Auto-idle & Flow rate control



#### **CONTROL PANEL**

- A Standard screen
- Anti-theft protection
- Filter/oil information
- D Operation history
- E Flow rate control
- Contrast control





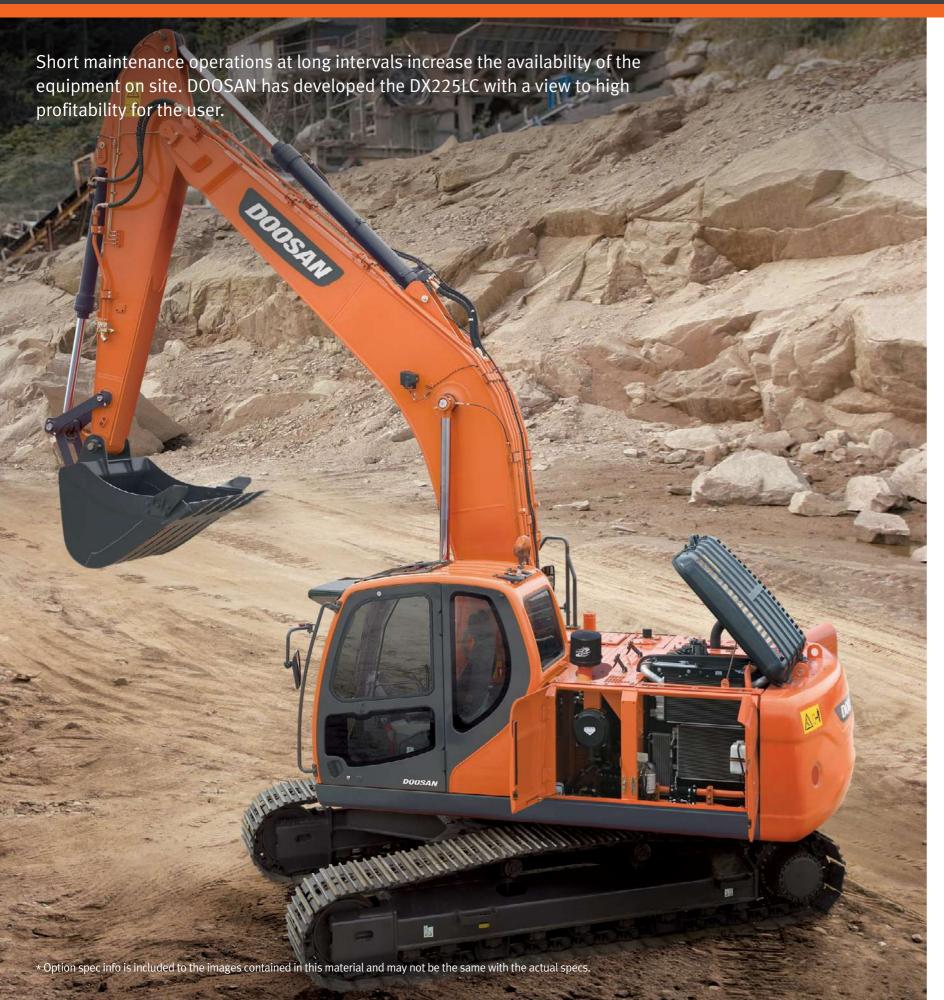
#### CONTROL LEVER

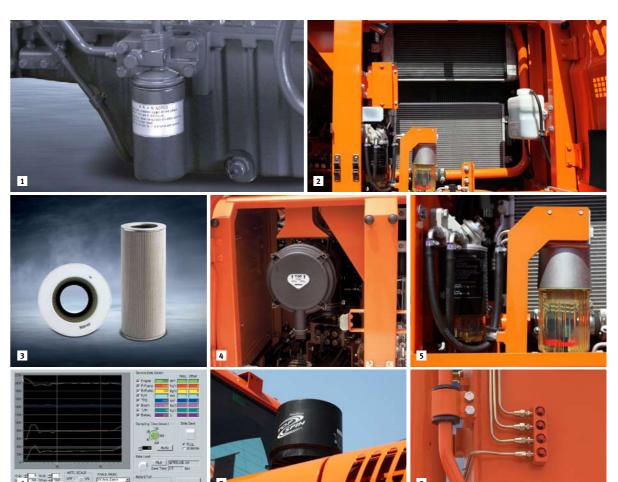
Very precise control of the equipment increases versatility, safety and facilitates tricky operations requiring great precision. Levelling operations and the movement of lifted loads in particular are made easier and safer. DOOSAN designed the DX225LC by putting the operator at the center of the development goals. The result is significant ergonomic value that improves the efficiency and safety of the operator. More space, better visibility, air conditioning, a very comfortable seat. These are all elements that ensure that the operator can work for hours and hours in excellent conditions.

#### **AIR SUSPENSION SEAT (OPTIONAL)**

Equipped with various functions of adjustment forth and back and, and lumbar support, it reduces the vibration of equipment transmitted during work in an effective way. Also for considering winter working environment, Seat warmer functions equipped.

# **EASY MAINTENANCE**





#### **■ ENGINE OIL FILTER**

The engine oil filter offers a high level of filtration allowing the oil change interval to be increased to 500 hours. It is easy to access and is positioned to avoid contaminating the surrounding environment.

#### **EASY MAINTENANCE**

Access to the various radiators is very easy, making cleaning easier. Access to the various parts of the engine is from the top and via side panels.

#### **11** HYDRAULIC OIL RETURN FILTER

The protection of the hydraulic system is made more effective by the use of glass fiber filter technology in the main oil return filter. This means that with more than 99.5% of foreign particles filtered out, the oil change interval is increased.

#### **AIR CLEANER**

The large capacity forced air cleaner removes over 99% of airborne particles, reducing the risk of engine contamination and making the cleaning and cartridge change intervals greater.

#### **MATER SEPARATOR**

High efficiency fuel filtration is attained by the use of multiple filters, including a fuel pre-filter fitted with a water separator that removes most moisture from the fuel.

#### **DESIGNATION** PC MONITORING (DMS)

A PC monitoring function enables connection to the EPOS<sup>TM</sup> system, allowing various parameters to be checked during maintenance, such as pump pressures, engine rotation speed, etc. and these can be stored and printed for subsequent analysis.

#### **7** PRE CLEANER

Top-spin pre-cleaner separates 99% of 20 micron and above particles.

### **EXECUTE:** CENTRALIZED GREASE INLETS FOR EASY MAINTENANCE

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

## TELEMATICS SERVICE (OPTIONAL)

## **GLOBAL PARTS NETWORK**

#### **TELECOMMUNICATIONS**

Data flow from machine to web

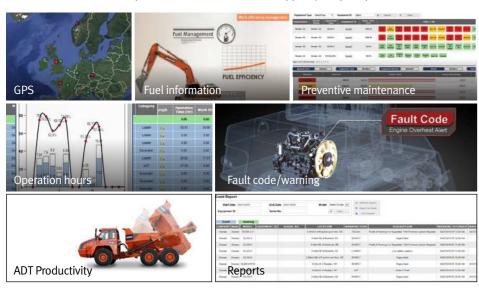






#### **FUNCTIONS**

Doosan Telematics Service provides various functions to support your great performance



#### **TELEMATICS SERVICE BENEFITS**

Doosan and dealer support customers to improve work efficiency with timely and responsive services

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

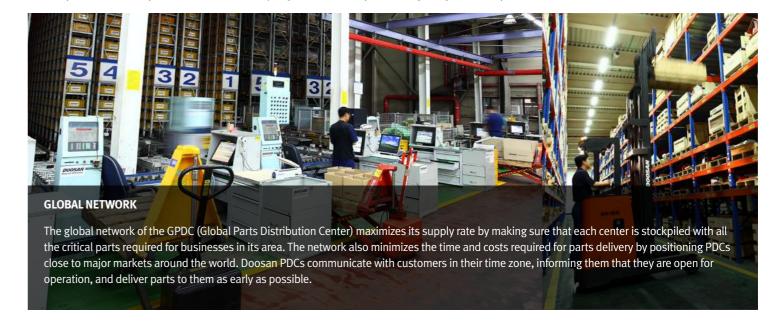
Responsive to customer's voice

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

	FUNCTION	EXCAVATOR	WHEEL LOADER	ADT	
GPS	· Location · Geo-fence	All models	All models	All models	
E-mail reports	· Daily, Weekly, Monthly report	All models	All models	All models	
Operation hours	· Total operation hours	All models	All models	All models	
Operation nours	· Operation hours by mode	Tier 4 only	Tier 4 only	All Houels	
Maintenance parts	· Preventive maintenance by item	All models	Tier 4 only	All models	
Maintenance parts	replacement cycle	All models	riei 4 only	All Houels	
Fault code/ Warning	· Fault code	All models	Tier 4 only	All models	
rault code/ warning	· Machine Warnings on Gauge Panel	All models	fiel 4 offig	All models	
Fuel information	· Fuel level	All models	Tier 4 only	All models	
ruel information	· Fuel consumption	Tier 4 only	riei 4 Offly	All models	
Dumm compositu	· Dump tonnage	NI/A	NI/A	All models	
Dump capacity	· Count of Work Cycle	N/A	N/A	All models	

#### GLOBAL PDC (PARTS DISTRIBUTION CENTER) NETWORK

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



#### The Global Parts **Distribution Center Network**

PDCs had been set up as shown below, including Mother PDC in Ansan, Korea. The seven other PDCs include one in China (Yantai), one in the USA (Chicago), one in Brazil (Campinas), 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



parts delivery

Shortest distance/time



Real-time service support



**Minimum** downtime

# **ATTACHMENTS**

Heavy Construction Bucket, which is also called Heavy Duty bucket, is the most commonly used bucket in the construction equipment market and is designed mainly for use in heavy construction but also used in low density mining and quarry application.





#### General Purpose bucket

which is also called General Purpose bucket, is designed for digging and re-handling soft to medium materials e.g. construction equipment market and is materials with low wear characteristics such as top-soil, loam, coal.



#### Heavy Duty bucket

which is also called Heavy Duty bucket, is the most commonly used bucket in the designed mainly for use in heavy construction but also used in low density mining and quarry application.



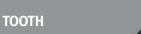
#### Severe Duty bucket

which is also called Severe Duty bucket. The bucket is designed for use in high density mining and quarry application using high strength and high abrasion resistance materials. It can be used in the toughest of applications.



#### Extra Severe Duty Bucket

which is also called X class bucket. The bucket is designed for use in high density mining and quarry application using high strength and high abrasion resistance materials. It can be used in the toughest of applications.



#### **GD (General Duty) Tooth**

Optimized design for Doosan's GP and the new General Construction bucket.
Suitable for machines ranging from 14 to 70 tons. Recommended for general construction and utility loading applications.

#### HD (Heavy Duty) Tooth

including excavating, trenching, loading and medium density quarries and mining.

#### SD (Severe Duty) Tooth







**Heavy Duty Bucket** 

	Capacity (SAE/PCSA)
GENERAL PURPOSE BUCKET	$0.39  /  0.51  /  0.81  /  0.92  /  1.05  /  1.17  /  1.28 \ m^3$
HEAVY DUTY BUCKET	$0.60\ /\ 0.76\ /\ 0.92\ /\ 1.08\ /\ 1.24\ /\ 1.35\ /\ 1.40\ /\ 1.51\ m^3$
SEVERE DUTY BUCKET	$0.91 / 1.07 / 1.23  \text{m}^3$









**DEMOLITION** 

**BUCKET** 

		•			
		Model	Weight	Tool diameter	Frequency
HYDRAULIC BREAKER		DXB180H	1,720 kg	140 mm	320~580 BPM
		Model	Weight	Max. Jaw opening	Force at Tip
FIXED PULVERIZER		FP22	1,375 kg	732 mm	54 t
ROTATING CRUSHER		RC22	1,780 kg	732 mm	56 t
MULTI-PROCESSOR	C/D/P/S	MP22	2,040 / 2,050 / 2,210 / 1,880 kg	903 / 797 / 893 / 503 mm	68 / 70 / 64 / 80 t

- C: Crushing jaw
- D: Demolition jaw
- P: Pulverizing jaw
- S: Shearing jaw











**MATERIAL HANDLING** 

Max. Closing Force

		model	Weight	max jan opening	maxi crosms rorce	cupacity
MULTI-GRAPPLE		MG22	1,423 kg	2,044 mm	5.7 t	$0.75 \text{ m}^3$
STONE GRAPPLE		SG22	1,235 kg	2,000 mm	-	0.45 m <sup>2</sup>
WOOD GRAPPLE	L/P	WG22	1,132 / 1,010 kg	2,000 mm	-	0.62 m <sup>2</sup>
LOG GRAPPLE	L/P	LG22	1,280 / 1,250 kg	2,000 mm	-	$0.67 \text{ m}^2$
ORANGE GRAPPLE		OG22	1.300 kg	2.150 mm	-	0.50 m <sup>3</sup>

L : Link type P: Pendulum type

**EARTH MOVING** 







	Model	Weight	Max. Jaw opening	Capacity
CLAMSHELL BUCKET	CB22	1,440 kg	1,725 mm	0.80 m <sup>3</sup>
	Model	Weight	Base plate (WxL)	Impulse force
PLATE COMPACTOR	PC22	1,325 kg	860 x 1,200 mm	11.2 t
	Model	Weight	Length	
RIPPER	RP22	450 kg	1,278 mm	



#### **CONNECTING**

	Model	Weight	Bucket Pin dia.	Working rage (Pin to Pin)
UICK COUPLER	QC22	319 kg	80 mm	445 ~ 514 mm

### TECHNICAL SPECIFICATIONS

#### **ENGINE**

#### Model

Doosan DL06

4 valves per cylinder, water cooled, 4-Cycle Common Rail Emission level TIER-III

#### **Number of cylinders**

#### Nominal flywheel power

172 HP @ 2,000 rpm

#### Max torque

68 kgf.m @ 1400 rpm

#### Piston displacement

5,890 cc (359 cu.in)

#### Bore & stroke

Ø 100 x 125 mm (3.9" x 4.9")

#### Starter

24 V / 4.5 kW

#### **Batteries**

2 x 12 V / 100 Ah

#### Air cleaner

Double element with auto dust evacuation.

#### **HYDRAULIC SYSTEM**

The heart of the system is the EPOS™ (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 206.5 l/min (2 x 55 US gpm, 2 x 45 Imp gpm)

Gear pump - max flow: 28.5 l/min (7.5 US gpm, 6.3 lmp gpm)

#### Maximum system pressure

Boom/arm/Bucket:

Normal mode: 330 kgf/cm<sup>2</sup> (324 bar) Power mode: 350 kgf/cm<sup>2</sup> (343 bar)

Travel: 330 kgf/cm<sup>2</sup> (324 bar) Swing: 270 kgf/cm<sup>2</sup> (264 bar)

#### **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 1,260 mm (4.9" x 3.3" x 4'2")
Arm	1	140 x 100 x 1,450 mm (5.5" x 3.9" x 4'9")
Bucket	1	120 x 80 x 1,060 mm (4.7" x 3.1" x 5'4")

#### **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 11.0 rpm

#### WEIGHT

Boom 5,700 mm (18'8") Arm 2,900 mm (9'6") Bucket SAE/PCSA 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')	21,500 kg (47,399 lb)	0.45 kgf/cm² (44 kpa, 6.40 psi)
	700 mm (2' 4")	21,800 kg (48,060 lb)	0.40 kgf/cm² (39 kpa, 5.69 psi)
	800 mm (2' 8")	22,100 kg (48,721 lb)	0.35 kgf/cm² (34 kpa, 4.78 psi)
	900 mm (2' 11")	22,400 kg (49,383 lb)	0.31 kgf/cm² (30 kpa, 4.41 psi)

#### **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

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")

#### **DRI**

#### Trave

5.5

#### Maxi

11,50

#### Maxi

35°

#### BU

	Engine	e oil			
VE	281 (7	4 US gal)			
track is driven by an independent axial piston motor throu	ugh a <b>Swing</b>	drive			
etary reduction gearbox. levers with control pedals guarantee smooth travel with co	ounter- 5 l (1.3	2 US gal)			
ion on demand.	Final o	rive			
el speed (fast/slow)	(each	=Travel Device = travel motor + travel redu	ction gear)		
3.0 km/h (3.4 / 1.9 mph)	2 x 3.3	2 x 3.3 l (0.87 US gal)			
mum traction force	Hydra	ulic tank			
00 / 21,800 kgf (25,353 / 48,061 lbf)	195 l (	51.5 US gal)			
imum grade					
70%)					
CKET					
	TRACK	STD Track			
	C/W (ton)	4.1	5.3		

**ENVIRONMENT** 

Sound level guarantee

Cab sound level

**Fuel tank** 

73 dB (A) (ISO 6396)

400 l (105.7 US gal)

24 l (6.3 US gal)

**REFILL CAPACITIES** 

Cooling system (Radiator capacity)

103 dB (A) (2000/14/EC)

Noise levels comply with environmental regulations (dynamic values).

					C/W (ton) 4.1				5.3		
					SHOE (mm)			6	00		
Duraliset Town	Capaci	ty (m³)	Width	ı (mm)	141: Jel- (1)		5.7m Boom	1	5.2m Boom	5.7m Boom HD	SLR (8.5m)
Bucket Type	SAE/ PCSA	CECE	W/O Cutter	With Cutter	Width (kg)	2.4m Arm	2.9m Arm	3.5m Arm	2.0m Arm	2.9m HD	SLR (6.2m)
	0.39	0.35	736	820	330	Х	Х	Х	Х	Х	Α
	0.51	0.47	722	772	529	A	Α	Α	A	A	Χ
	0.81	0.72	1,064	1,126	654	A	A	Α	A	A	Χ
G-Class	0.92	0.81	1,172	1,236	697	A	A	Α	A	A	Χ
	1.05	0.92	1,308	1,370	751	A	A	В	Α	В	Χ
	1.17	1.0	1,428	1,491	809	A	В	С	Α	С	Χ
	1.28	1.10	1,542	1,605	848	В	С	D	Α	С	Χ
	0.60	0.56	750	769	651	Α	A	Α	Α	A	Χ
	0.76	0.69	900	946	722	Α	A	Α	Α	A	Х
	0.92	0.83	1,050	1,096	813	A	A	В	A	A	Х
Heavy Duty Bucket	1.08	0.97	1,200	1,246	884	Α	В	С	A	В	Χ
Heavy Duty Bucket	1.24	1.11	1,350	1,396	955	В	С	D	A	С	Х
	1.35	1.20	1,450	1,796	1,023	С	D	D	A	D	Χ
	1.40	1.24	1,500	1,546	1,046	С	D	Х	В	D	Χ
	1.51	1.34	1,600	1,646	1,114	С	D	Х	В	Х	Χ
	0.91	0.82	1,050	N/A	1,009	Α	Α	В	Α	В	Χ
Severe Duty Bucket	1.07	0.96	1,200	N/A	1,113	Α	С	D	A	С	Χ
	1.23	1.10	1,350	N/A	1,193	С	D	D	A	D	Χ
			Maximun	n load pin-or	n(payload+bucket)	3,391	2,997	2,687	3,915	2,878	1,272

Based on ISO 10567 and SAE J296, arm length without quick change clamp A : Suitable for materials with density of 2,100 kg/m³ (3,500lb/yd³) or less

B: Suitable for materials with density of 1,800 kg/m<sup>3</sup> (3,000lb/yd<sup>3</sup>) or less C: Suitable for materials with density of 1,500 kg/m³ (2,500lb/yd³) or less

D : Suitable for materials with density of 1,200 kg/m³ (2,000lb/yd³) or less X: Not recommended

This bucket recommendation is based on machine stability considering the tipping load with certain density of handling material, and should be strictly followed. It's more recommendable to use a smaller size of bucket than recommendation under the severe working condition and application to avoid the durability risks.

### **STANDARD & OPTION**

#### **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
- Cigarette lighter and ashtray
- Cup holder
- Hot & Cool box
- LCD color monitor panelE/G RPM control dial
- L/G KFW Control dial
- AM/FM radio + MP3 (USB)
- Remote radio ON/OFF switch
- 12V spare powers socket
- Serial communication port for laptop PC interface
- Joystick lever with 3 switches
- Sun visor
- Sun roof

#### 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
- Battery protector cover

#### 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
- Alternator (24V, 60A)
- 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

- 5.2m Boom
- 5.7m Boom
- 8.5m Boom
- 2.0m Arm
- 2.4m Arm
- 2.4m Arm (Heavy duty)
- 2.9m Arm
- 2.9m Arm (Forestry)
- 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 / Telescopic beacon
- Lock valve
- Rear lamp for number plate
- Emergency stop engine switch

#### Cabin & Interior

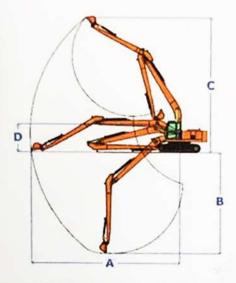
- Air suspension seat
- Rain Shield
- High seat Mount
- Breaker pedal
- ROPS/FOGS Cabin
- Cabin front guard (Upper and lower guard)
- Steel roof cover
- Side mirror

#### Others

- Piping for crusher ,Two way
- Piping for quick clamp
- Piping option
- Breaker with flow control valve Crusher
- Crusher with tilting Rotating
- Clamshell Quick Clamp
- 700mm / 800mm / 900mm shoe
- Lower wiper
- 80A alternator
- Fuel filler pump
- Working Lights
- 4-front / 2-rear on cabin
- 2-front on cabin1 on counterweight
- Counterweight (3.8 Ton / 5.3 Ton)
- Noise Kit
- .....
- Hydraulic Oil
- Cold weather (VG32)
- Normal (VG46)
- Tropical weather (VG68)
- Breaker filter
- Water separator with heater
- Oil washed pre cleaner
- Heavy duty under coverShort & Fixed track
- Forestry & Fixed track
- Heavy duty & Fixed track



## Long Reach/High Reach Front



Each long reach package come standard with the following items:

- 1x boom with full set of hydraulic lines
- 1x stick/dipper arm with full set of hydraulic lines
- 1x bucket
- 1x bucket cylinder/ram
- 1x boom yoke pin
- 1 set of Hydraulic pressure hose
- 1 set of linkage
- 2x bucket pins
- 2x bucket link pins

Excavator Operating	Length		A Max. Reach			B Max. Depth		C Max. Height		D Boom Height		Approximate Bucket Capacity	
Weight	m	ft	m	ft	m	ft	m	ft	m	ft	m <sup>3</sup>	Yard <sup>3</sup>	
12 – 14 ton	12.0	39'	12.00	39′ 4″	8.30	27′ 2″	10.50	34′ 5″	2.10	6' 11"	0.4	0.52	
(26,400 – 30,8000 lb)	13.0	43'	13.00	42′ 8″	9.00	29′ 6″	10.90	35′ 9″	2.10	6' 11"		0.39	
15 – 16 ton (33,000 – 35,200 lb)	14.0	46"	14.00	45′ 11″	10.70	35′ 0″	11.80	38′ 8″	2.30	7' 6"	0.4	0.52	
20 -2 2 ton	15.5	50'	15.50	50' 10"	11.46	37' 7"	13.78	45' 3"	2.50	8.3	0.50	0.65	
(44,000 - 48,400 lb)	16.5	54'	16.50	54' 2"	12.16	39'11"	14.40	47' 3"	2.50	8' 3"	0.40	0.52	
23 - 27 ton	17.0	56'	17.00	55' 9"	12.01	39' 5"	14.70	48' 3"	2.70	8' 11"	0.50	0.65	
(50,600 - 55,000 lb)	18.0	59'	18.00		12.85	42' 2"	15.60	51' 2"	2.70	8' 11"	0.40	0.52	
28 - 30 ton	18.0	59'	18.00	59′0"	13.80	45' 1"	15.20	49° 10"	3.10	10' 2"	0.60	0.78	
(61,600 - 66,000 lb)	19.0	62'	19.00	62′3"	14.00	45' 11"	15.50	50° 10"	3.10	10' 2"	0.50	0.65	
33 - 35 ton	18.5	60'	18.50	60' 5"	14.50	47' 6"	15.10	49' 6"	3.40	11'0"	0.70	0.91	
(72,600 - 77,000 lb)	20.0		20.00	65' 6"	16.00	52' 6"	15.60	51' 3"	3.40	11'0"	0.60	0.78	
40 - 45 ton	21.0	68'	21.00	68' 10"	15.30	50' 2"	15.58	49' 3"	3.70	12' 2"	0.80	1.04	
(88,000 - 99,000 lb)	22.0	72'	22.00	72' 2"	16.25	53' 4"	15.92	52' 3"	3.70	12' 2"	0.70	0.91	
46 - 55 ton	21.0	68'	21.00	68' 10"	15.00	49' 3"	15.95	52' 4"	3.95	12' 11"	1.00	1.30	
(110,000 - 121,000 lb)	22.0	72'	22.00	72' 2"	15.80	51' 10"	16.05	52' 8"	3.95	12' 11"	0.90	1.17	
60 - 65 ton (132,000 - 143,000 lb)	23.0	75'	23.00	75'5"	17.50	57'4"	17.50	57'5"	4.10	13' 6"	1.20	1.56	
70 - 75 ton (154,000 - 165,000 lb)	24.0	79'	24.00	78' 8"	18.10	59' 3"	19.00	62' 4"	4.60	15' 1"	1.30	1.69	
80 - 90 ton (187,000 - 198,000 lb)	25.0	82'	25.00	82'0"	18.60	61'0"	19.20	62'11"	4.70	15' 5"	1.40	1.82	
100 - 110 ton	27.0	88'	27.00	88'7"	20.00	65' 7"	19.00	62' 4"	5.00	16' 5"	1.60	2.08	
(220,000 - 242,000 lb)	28.0	92'	28.00	91'9"	21.00	68' 10"	20.00	65' 7"	5.00	16' 5"	1.40	1.82	
120 - 130 ton	28.0	92'	28.00	91'9"	21.00	68' 10"	20.00	65' 7"	5.50	18' 1"	1.60	2.08	
(264,000 - 286,000 lb)	29.0	95'	29.00	95'1"	22.00	72' 2"	20.50	67' 3"	5.50	18' 1"	1.40	1.82	

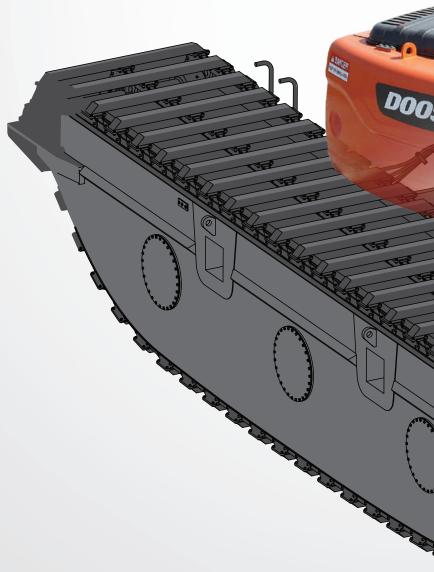
<sup>\*</sup> The above specifications are for reference only, actual working range may vary from machine models.

<sup>\*\*</sup> For the benefit of continuous product improvement, specifications are subjected to change without prior notice.

### **DOOSAN AMPHIBIOUS**

Doosan Amphibious is designed to enhance mobility in marshes, swampy area and soft terrain with floating pontoons. Doosan also offer Super Long Reach front kit for more deep and far digging. Using AU kit and SLR kit together, it maximizes versatility of Doosan excavator.





#### DOOSAN AMPHIBIOUS USING THE 6 KINDS OF GOOD REASONS



#### **ONE-STOP SHOP**

One place for complete solutions : (carrier + application + parts + service)



#### SERVICE

Broad coverage via the Doosan service network, fully supported by Wheel loader product specialists.



#### **ENGINEERING APPROVED**

Optimized for Wheel loader equipment high efficiency and performance, resulting in lower running and maintenance cost.



#### OUALITY

Products manufactured to highest standards.



#### **WARRANTY**

Avoid compatibility issues and operating differences from using Non-approved application.



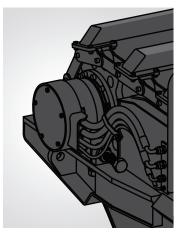
## **CUSTOMIZED FEATURES**

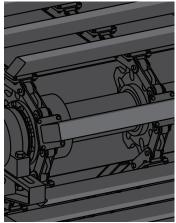
Doosan Amphibious has proven itself and performed exceedingly well in the followings applications:

- Dredging
- Landscaping
- Erosion control and prevention
- · Deepening of canal and river deltas
- · Maintenance and cleaning of rivers, lakes, shorelines, ponds
- · Swamps and soft terrain construction.

#### MULTI-SYNCHRONOUS DRIVE SYSTEM AMPHIBIOUS OPTION

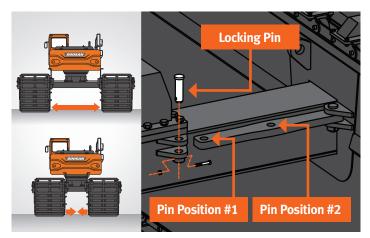
- · Proprietary multi-synchronous drive motor design.
- · Motors are mounted on front and rear of each pontoon.
- · It offers superior tracking power as compared to a single motor design.
- · A similar concept that is applied to a full time 4x4 gear system of a land vehicle





#### Non Hydraulic Extendable Amphibious (standard)

- · For non hydraulic extendable design, there are 2 separate locking pin positions for each pontoon on the horizontal mounting beams.
- $\cdot$  Users can choose their desired overall track width during the installation process.



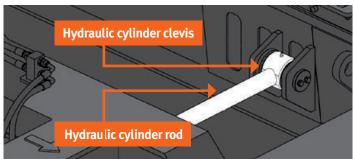
#### AMPHIBIOUS MODULAR DESIGN

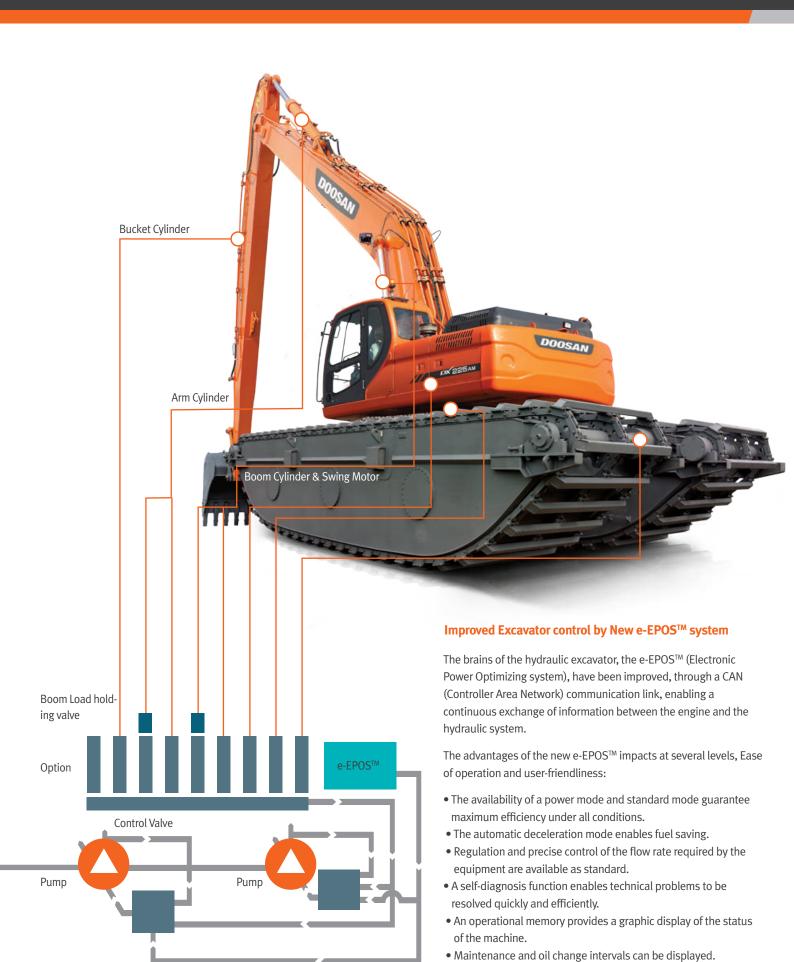
- · Designed to be easily transported by low bed trailer.
- · Amphibious modules and attachments are designed to be able to fit into 40ft container.
- Both the assembly and disassembly processes can be achieved in under 3 hours if equipped with proper tools and crane.
- · No special tooling is required for the assembly and disassembly process.

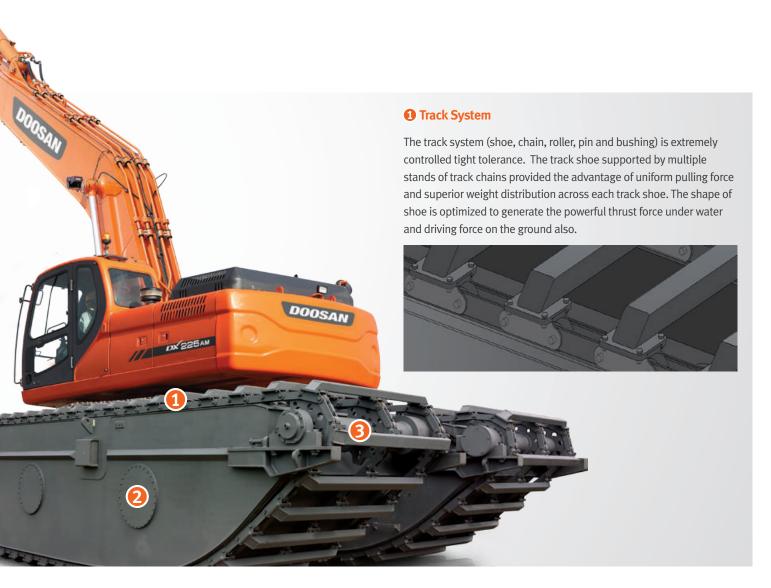


### **Hydraulic Extendable Amphibious & Retractable Pontoons** (Optional)

- Extension and retraction of pontoons "on the fly" (model dependent).
- · When fully extended, it offers the extra stability needed when situation calls for Fully retracted provide the flexibility of narrow track width when needs arises.
- Designed for ease of land transportation of complete machine by trailer when pontoons are fully retracted.
- · Higher ROI through long term saving of manpower, crane hiring and other logistical cost
- $\cdot$  Hydraulic extendable pontoons is a standard feature for 8 ton and 14 ton class and below amphibious machine.
- · Optional features for 20 ton class and above model.

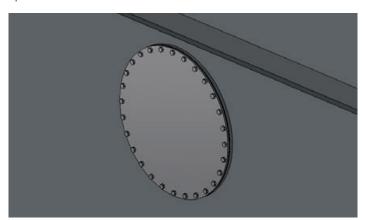






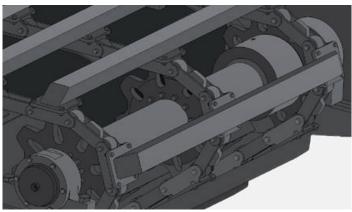
#### 2 Manhole

Regular inspection and maintenance is very easy because of manholes side pontoon. Manhole is designed most suitable position to check inside of pontoon and the size of manhole is big enough to come in and out for a operator.



#### **3** Axle drum and Sprocket

Non weld-on sprocket design which precisely machined and bolted onto axial ensures a perfect alignment of each sprocket across the axial, a critical criterion for the longevity of the track chain.



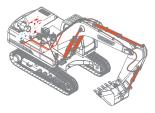
## **FUEL EFFICIENCY**



#### **RELIEF CUTOFF**

to prevent transfer of unnecessary flow

- Typically, the pump tends to supply flow even when the maximum pressure on the system is reached due to severe working environments and large workloads.
- Relief cutoff technology of Doosan prevent transfer of unnecessary flow to keep powerful working level at the maximum value while reducing consumption of fuel.





#### **OPTIMIZED LEVER CONTROL**

to prevent unnecessary fuel consumption

When operator takes break for rest with the joystick kept fixed, both of the engine and the pump are kept in standby mode with maximum rotation rate and hydraulic power. In such a case, unnecessary fuel consumption takes place.







## **RELIABILITY**

DOOSAN uses computer-assisted design techniques, highly durable materials and structures then test these under extreme conditions. Durability of materials and longevity of structures are our first priorities.

#### **Strengthened Boom**

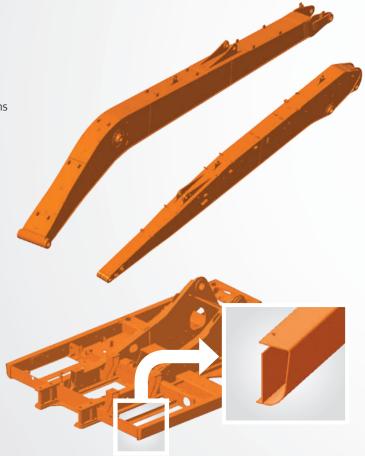
The Shape of the boom has been optimized by finite elements design, allowing the loads to be better distributed throughout the structure. This combined with increased material thickness means improved durability and reliability by limiting element fatigue.

#### **Arm Assembly**

In the arm assembly greater strength has been gained by using cast elements and reinforcement around the bosses to give it an increased lifetime.

#### **D-type Frame**

The D-type frame and chassis frame add strength and minimize distortion due to shocks.





#### **Polymer shim**

A polymer shim is added to the bucket pivot to maintain precise control over the equipment.

#### Dry type of pre cleaner

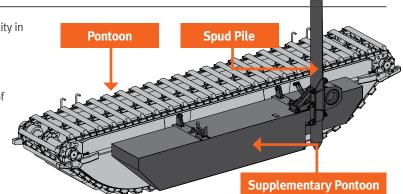
Pre cleaner filters out impurities again for keeping steady machine performance.





### **SUPPLEMENTARY PONTOONS AND SPUDS (OPTIONAL)**

- $\cdot$  Supplementary pontoons can be added on each side to boost stability in deeper water operation.
- · Spud piles attach to supplementary pontoons help to overcome buoyancy effect, it offers added stability and enhanced operability.
- · Pontoons are designed and built with provision for future addition of supplementary pontoon and spud system.
- · Future proof in design.



#### **SUPER LONG REACH KIT (OPTIONAL)**

- · Doosan SLR kit is designed for using in drainage canal construction and preservation and Light duty excavation at long distance
- · Doosan offers SLR kit range from 8 tons machine to 34tons machine.





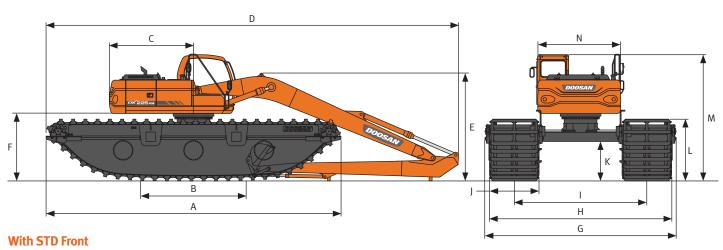
Describetion	1126	Doosan Amphibious Model				
Description	Unit	DX140 AM	DX225 AM			
Boom Length	mm	7,020	8,100			
Arm Length	mm	5,100	5,800			
Bucket Capacity	mm	0.4	0.5			
Bucket Breakout Force (SAE)	kgf	8,255	10,469			
Arm Digging Force (SAE)	kgf	3,274	5,074			
Ground Pressure	kgf/cm <sup>2</sup>	0.144	0.161			

<sup>\*</sup> Please do not hesitate to contact "DOOSAN DEALER" for SLR Front option of DX80R AM, DX260 AM, DX300 AM and DX340 AM.





## **DIMENSIONS & WORKING RANGE**



Dimensions	Description	Heit	Doosan Amphibious Models												
Dimensions	Description	Unit	DX80r am	DX140 AM	DX225 AM	DX260 AM	DX300 AM	DX340 AM							
А	Max. Track Length	mm	7,000	9,290	9,630	9,630	10,840	11,840							
В	Track Length on Ground	mm	3,200	4,500	4,150	4,150	5,000	5,200							
С	Rear Upper Structure Length	mm	1,300	2,200	2,750	2,995	3,200	3,500							
D	Overall Length	mm	7,825	9,865	11,150	11,490	12,450	13,300							
Е	Height of Boom	mm	2,410	2,915	3,375	3,460	3,730	3,705							
F	Counterweight Clearance	mm	1,635	1,835	2,170	2,200	2,240	2,275							
G	Overall Width, min/max	mm	2,990 / 3,790	4,220 / 5,320	4,800 / 6,280	5,470 / 6,910	6,200 / 7,200	6,270 / 7,270							
Н	Undercarriage width, min/max	mm	2,990 / 3,790	3,950 / 5,050	4,470 / 5,950	5,170 / 6,610	5,910 / 6,910	5,970 / 6,970							
1	Track Gauge, min/max	mm	1,860 / 2,660	2,500 / 3,600	2,850 / 4,330	3,250 / 4,690	3,990 / 4,990	4,020 / 5,020							
J	Track Cleat Width	mm	1,100	1,450	1,620	1,920	1,920	1,950							
K	Min. Ground Clearance	mm	1,030	1,140	1,300	1,300	1,300	1,130							
L	Track Height	mm	1,550	1,690	2,030	2,030	2,030	2,030							
M	Overall Cabin Height	mm	3,540	3,720	4,090	4,060	4,155	4,205							
N	Upper Structure Overall Width	mm	2,266	2,540	2,710	2,710	2,960	2,990							

#### With SLR Front Option \*

Dimensions	Description		Doosan Amphibious Models									
Dimensions	Description	Unit	DX140 AM	DX225 AM								
А	Max. Track Length	mm	9,290	9,630								
В	Track Length on Ground	mm	4,500	4,150								
С	Rear Upper Structure Length	mm	2,200	2,750								
D	Overall Length	mm	12,240	13,550								
E	Height of Boom	mm	2,950	3,470								
F	Counterweight Clearance	mm	1,835	2,170								
G	Overall Width, min/max	mm	4,220 / 5,320	4,800 / 6,280								
Н	Undercarriage width, min/max	mm	3,950 / 5,050	4,470 / 5,950								
I	Track Gauge, min/max	mm	2,500 / 3,600	2,850 / 4,330								
J	Track Cleat Width	mm	1,450	1,620								
K	Min. Ground Clearance	mm	1,140	1,300								
L	Track Height	mm	1,690	2,030								
М	Overall Cabin Height	mm	3,720	4,090								
N	Upper Structure Overall Width	mm	2,540	2,710								

<sup>\*</sup> Please do not hesitate to contact "DOOSAN DEALER" for dimensions (SLR Front option) of DX80R AM, DX260 AM, DX300 AM and DX340 AM.

#### DX225 AM on Ground

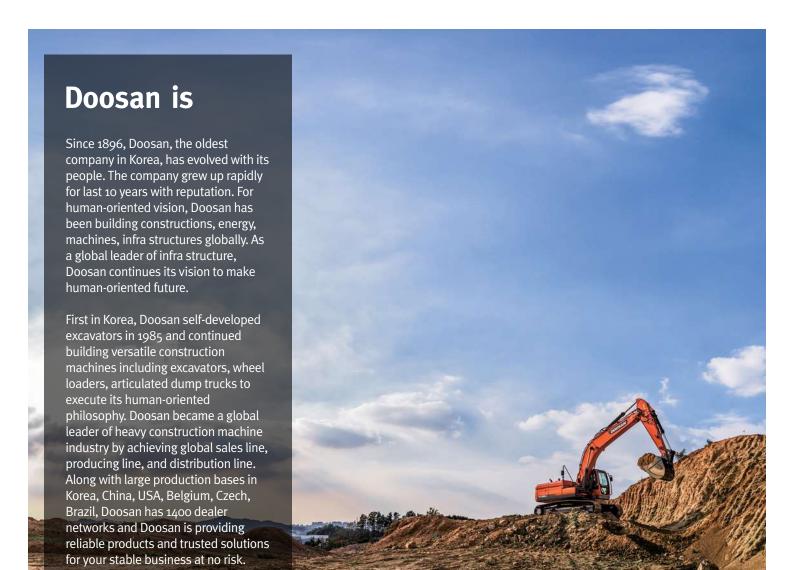
A(m)	:	2		3		4		5		5		7		3	Maximum Reach Position		
B(m)	Ð	(‡	ď	佳	Ð	C‡®	ď	( <del>]</del> =	Ð	(‡	4	(#	F	(‡	f	C#	Reach (m)
9															2.83*	2.83*	6.53
8											3.40*	3.40*			2.67*	2.67*	7.34
7											3.88*	3.88*			2.59*	2.59*	7.95
6									4.26*	4.26*	4.06*	4.06*	3.59*	3.59*	2.58*	2.58*	8.39
5							5.31*	5.31*	4.74*	4.74*	4.35*	4.35*	4.09*	4.09*	2.62*	2.62*	8.69
4			10.85*	10.85*	7.75*	7.75*	6.20*	6.20*	5.29*	5.29*	4.70*	4.70*	4.30*	4.30*	2.72*	2.72*	8.87
3					9.20*	9.20*	7.08*	7.08*	5.85*	5.85*	5.06*	5.06*	4.52*	4.52*	2.87*	2.87*	8.93
2			6.84*	6.84*	10.24*	10.24*	7.79*	7.79*	6.33*	6.33*	5.38*	5.38*	4.71*	4.71*	3.08*	3.08*	8.88
1			7.80*	7.80*	10.77*	10.77*	8.26*	8.26*	6.67*	6.67*	5.60*	5.60*	4.82*	4.82*	3.39*	3.39*	8.71
O (Ground)	6.65*	6.65*	9.61*	9.61*	10.86*	10.86*	8.44*	8.44*	6.83*	6.83*	5.69*	5.69*	4.81*	4.81*	3.82*	3.82*	8.42
-1	8.90*	8.90*	12.03*	12.03*	10.58*	10.58*	8.33*	8.33*	6.76*	6.76*	5.59*	5.59*			4.47*	4.47*	7.99
-2	11.49*	11.49*	12.88*	12.88*	9.93*	9.93*	7.90*	7.90*	6.40*	6.40*	5.17*	5.17*			4.67*	4.67*	7.41
-3	14.73*	14.73*	11.27*	11.27*	8.82*	8.82*	7.04*	7.04*	5.60*	5.60*					4.71*	4.71*	6.61
-4			8.90*	8.90*	7.03*	7.03*	5.46*	5.46*							4.59*	4.59*	5.53

- 1. Unit of lifting weight is 1,000 kgf.
- $2.\,\mbox{Load}$  point is the end of the arm equipped with 0.81 meter cubic bucket capacity.
- 3. Capacities marked with an asterisk (\*) are limited by hydraulic capacities.
- 4. Lift capacities shown do not exceed 75 % of minimum tipping loads or 87 % of hydraulic capacities.
- 5. The least stable position is over the front.
- 6. Machine in "normal hydraulic mode" and "full-extended pontoon" for lifting capacity on the ground.
- 7. Lift capacities are in compliance with ISO 10567. Maximam grade on the ground: 40 (84%)

#### DX225 AM on Ground

A(m)	1	2 3		3	4		5		6		7		8		9		10		11		12		13		Maximum Reach Position		n Position
B(m)	F	(Ha	F	C#	F	(#	F	C#	f	C#I	<b>F</b>	(H	Ð	(Ha	ð	( <del>†</del>	ß	Œ	ß	(#	F	(H)	ð	C#	ð	C#	Reach (m)
13																									3.42*	3.42*	8.59
12															3.22*	3.22*									3.22*	3.22*	9.65
11															5.14*	5.14*	4.67*	4.67*							4.67*	4.67*	10.52
10																	4.68*	4.68*	4.40*	4.40*					4.33*	4.33*	11.22
9															5.14*	5.14*	4.51*	4.51*	4.63	5.57*					3.62*	3.62*	11.80
8															5.62*	5.62*	5.09*	5.09*	4.62	6.02*	3.02*	3.02*			2.86*	2.86*	12.27
7															5.97	6.20*	5.21	5.66*	4.59	4.76*	3.24*	3.24*			2.05*	2.05*	12.65
6													6.83	7.45*	5.90	6.89*	5.16	6.18*	4.55	5.37	3.92*	3.92*			1.63*	1.63*	12.93
5									5.29*	5.29*	7.87	9.87*	6.72	8.96*	5.82	6.56*	5.10	7.14*	4.51	6.01*	4.01	4.50*	2.11*	2.11*	1.67*	1.67*	13.13
4			15.70*	N/A	9.13*	9.13*	7.13*	7.13*	6.72*	6.72*	7.71	11.05	6.60	8.57*	5.73	8.33	5.03	7.37	4.46	6.58	3.98	5.01*	2.58*	2.58*	1.72*	1.72*	13.26
3					13.67	N/A	10.87	15.54	8.95	12.84	7.55	10.88	6.48	9.40	5.64	8.24	4.97	7.30	4.41	6.53	3.94	5.47*	2.85*	2.85*	1.79*	1.79*	13.30
2					11.24*	N/A	10.59	15.26	8.75	12.64	7.40	10.74	6.37	9.29	5.56	8.15	4.90	7.24	4.36	6.48	3.90	5.84*	2.90*	2.90*	1.88*	1.88*	13.27
1			3.95*	N/A	8.76*	N/A	10.39	14.23*	8.59	12.48	7.28	10.61	6.27	9.19	5.48	8.08	4.84	7.18	4.32	6.44	3.87	5.82	2.68*	2.68*	2.10*	2.10*	13.17
(Ground)	3.48*	N/A	4.39*	N/A	7.28*	N/A	10.26	11.90*	8.47	12.36	7.18	10.51	6.20	9.11	5.42	8.02	4.80	7.13	4.28	6.40	3.85	5.79			3.25*	3.25*	12.98
-1	4.16*	N/A	4.99*	N/A	6.58*	6.58*	10.19	10.55*	8.40	12.29	7.11	10.45	6.14	9.06	5.37	7.97	4.76	7.09	4.25	6.37	3.83	5.50*			3.57	4.48*	12.71
-2	4.85*	N/A	5.67*	5.67*	7.17*	7.17*	9.82*	9.82*	8.35	12.25	7.07	10.40	6.10	9.02	5.34	7.94	4.73	7.07	4.24	6.36	3.82	5.77			3.69	5.58	12.36
-3	5.56*	N/A	6.42*	6.42*	7.91*	7.91*	10.15	10.50*	8.34	12.23	7.05	10.38	6.08	9.00	5.33	7.92	4.72	7.06	4.23	6.35					3.86	5.82	11.91
-4	6.30*	N/A	7.23*	N/A	8.79*	8.79*	10.18	11.47*	8.35	12.24	7.05	10.39	6.08	9.00	5.33	7.92	4.73	7.06	4.24	5.24*					3.97*	3.97*	11.36
-5	7.09*	N/A	8.13*	N/A	8.59*	N/A	7.23*	7.23*	6.59*	6.59*	7.07*	7.07*	6.10	6.51*	5.21*	5.21*	3.30*	3.30*							2.86*	N/A	10.68
-6	7.92*	N/A	9.12*	N/A	7.30*	N/A	6.25*	N/A	5.38*	N/A	4.63*	N/A	3.95*	N/A	3.31*	N/A									2.72*	N/A	9.85
-7			10.22*	N/A	12.56*	N/A	7.97*	N/A	4.33*	N/A	3.70*	N/A	3.06*	N/A											3.06*	N/A	8.83
-8							10.52	N/A	8.63	N/A	7.30	N/A													6.73	N/A	7.55

- 1. Unit of lifting weight is 1,000 kgf.
- $2.\,Load$  point is the end of the arm equipped with 0.5 meter cubic bucket capacity.
- 3. Capacities marked with an asterisk (\*) are limited by hydraulic capacities.
- ${\it 4. Capacities stated with "n/a" are limited by under$  $carriage's working position.}\\$
- 5. Lift capacities shown do not exceed 75 % of minimum tipping loads or 87 % of hydraulic capacities.
- 6. The least stable position is over the front.
- $7. \, \text{Machine in "normal hydraulic mode" and "full-extended pontoon" for lifting capacity on the ground.} \\$
- 8. Lift capacities are in compliance with ISO 10567.
- \* Please do not hesitate to contact "DOOSAN DEALER" for lifting capacity (SLR Front option) of DX80R AM, DX260 AM, DX300 AM and DX340 AM.





Doosan Infracore Korea Office (HQ) 27F, Doosan Tower, 275, Jangchungdan-ro, Jung-gu, Seoul, Korea(04563) Tel: 82 2 3398 8114

DIPBE-1002-01-1605

www.doosaninfracore.com/ce/