DOOSAN

Construction Equipment

DX200A

Engine Power	SAE J1349, 110kW(148HP)@1,900rpm
Operational Weight	20,600kg(45,415 lb)
Bucket / SAE	0.81 ~ 0.92m³(1.06 ~ 1.20 cu.yd)

: DX200A
Efficient Performance

When cost-effectiveness is critical on your jobsite, DX200A is the right answer.

DX200A guarantees you unrivalled fuel efficiency. See how much you can save with reduced fuel consumption and minimized cycle time.

Key points

The new DX200A hydraulic excavator has all the advantages of the previous model and now offers additional added value to the operator.

PERFORMANCE & PRODUCTIVITY

e-EPOS™

Doosan's DB58TIS mechanical engine, equipped with the new e-EPOS™ (Electronic Power Optimizing System) technology, delivers excellent work capabilities.

STRUCTURES

Structures

Doosan's DX200A structures feature Doosan's proprietary technologies that deliver excellent durability and guarantee continuous reliable performance comparable with that of a brand new product, thereby reducing maintenances and service costs.

DURABILITY

Durability

Undercarriage: The rollers, sprockets and track links are newly designed to minimize damage to the product.

HANDLING & COMFORT

Handling & Comfort

Doosan products are designed for convenience and safety. Doosan's machine is designed for comfortable, long-term operation in tough areas. Doosan's goal of ensuring user convenience can be seen even in the simplest service work.
A driver should keep the peak condition to produce a maximum workload. In particular, if a driver has to work more than 10 hours a day, the driver's condition can affect a workload significantly. Doosan equipment is designed to be operated conveniently at driver's wills, so that the driver can keep the best condition.

ECONOMICS

Economics

The Doosan excavator, a combination of four advanced technologies, guarantees a significant reduction of maintenance costs thanks to its exceptionally low rate of fuel consumption.

FUEL EFFICIENCY
17% BETTER

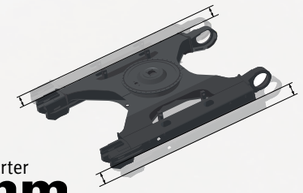
FUEL CONSUMPTION
15% SAVING

COMPACT & FAST

Compact & Fast

Doosan's DX200A is 380 mm shorter than the DX225LCA in track length, which makes the DX200A suitable for the small space where LC equipment is too wide to enter.

Undercarriage width :
DX225LCA 2,990mm
DX200A 2,800mm



① **190mm** shorter

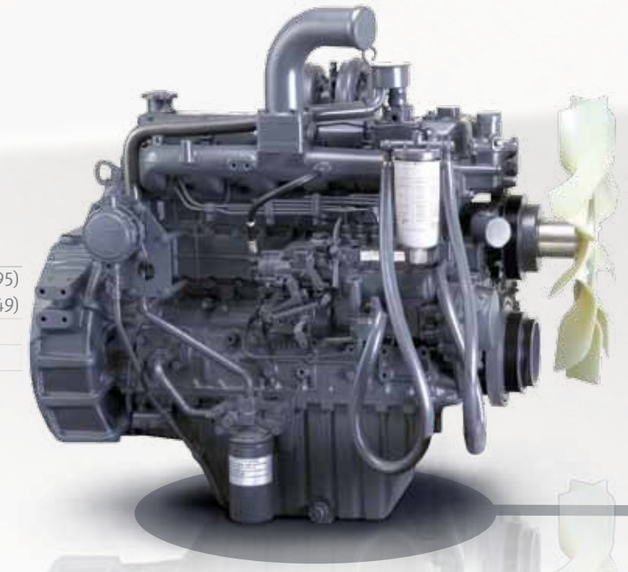
Track length :
DX225LCA 4,445mm
DX200A 4,065mm

② **380mm** shorter

Performance

DOOSAN DB58TIS ENGINE.
At the heart of the hydraulic excavator is the improved DOOSAN DB58TIS engine. It is combined with the new e-EPOS™ electronic control system, for optimum power and fuel saving.

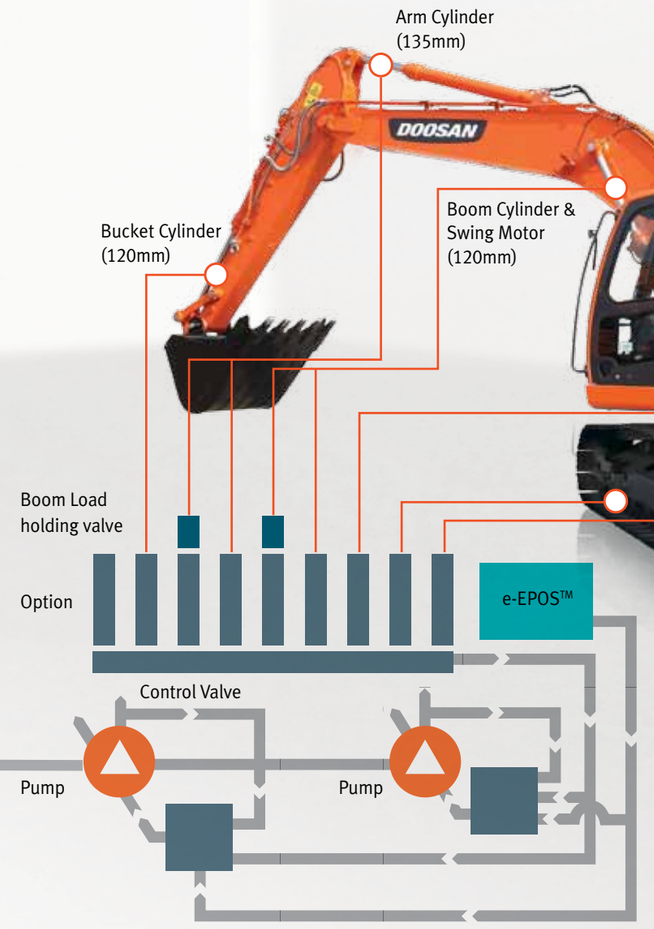
- Better performance by improved engine
- Energy efficiency reduces fuel consumption



Doosan DX200A engine

Make and Model	DOOSAN DB58TIS - 6 cylinders
Rated Horse Power	115 kW(157 PS, 154 HP) @1,900rpm (SAE J1995) 110 kW(150 PS,148 HP) @1,900rpm (SAE J1349)
Torque	61.5 kgf.m (603 Nm) @ 1,400 rpm
Alternator	24 V / 4.5 kW

EXCAVATOR CONTROL

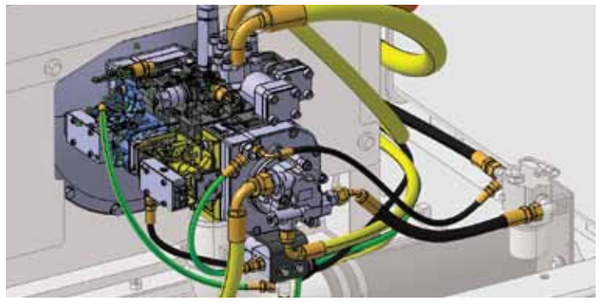


New e-EPOS™ system (Electronic Power Optimizing System).
The brains of the hydraulic excavator, the e-EPOS™, have been improved, through a CAN (Controller Area Network) communication link, enabling a continuous exchange of information between the engine and the hydraulic system. These units are now perfectly synchronised.

The advantages of the new e-EPOS™ impacts at several levels, Ease of operation and user-friendliness:

- The availability of a power mode and standard mode guarantee maximum efficiency under all conditions.
- The automatic deceleration mode enables fuel saving.
- Regulation and precise control of the flow rate required by the equipment are available as standard.
- A self-diagnosis function enables technical problems to be resolved quickly and efficiently.
- An operational memory provides a graphic display of the status of the machine.
- Maintenance and oil change intervals can be displayed.

SWING DRIVE. Shocks during rotation are minimized, while increased torque is available to ensure rapid cycles.



HYDRAULIC PUMP. The Main pump has a capacity of 2x222.3 ℓ/min reducing cycle time while a high capacity gear pump improves pilot line efficiency.

TRAVEL DEVICE. New design travel device gets more performance by improving efficiency and simplication of the internal structure.

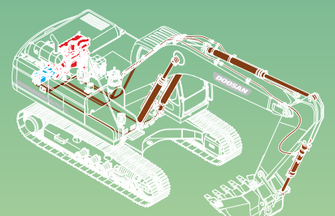
NEW OPTION BUCKET FOR MASS PRODUCTION. Newly provide short boom & 0.92m³ bucket.

Economics

RELIEF CUTOFF

1. 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.

2. Relief cutoff technology of Doosan prevent transfer of unnecessary flow to keep powerful working level at the maximum value while reducing consumption of fuel.



RELIEF CUTOFF

OPTIMIZED LEVER CONTROL & AUTO IDLE

1. The auto idle technology effectively controls the engine, and prevents unnecessary fuel consumption while the engine is kept in standby mode. Further, the optimized lever control technology effectively controls the pump to keep power of the pump maximum and prevent fuel consumption while the system is kept shut down.

   When operating the joystick, rotation rate of the engine and maximum hydraulic power of the pump increase simultaneously for efficient consumption of fuel. The technologies of Doosan enable operation of the system with maximum power in time.

2. 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.

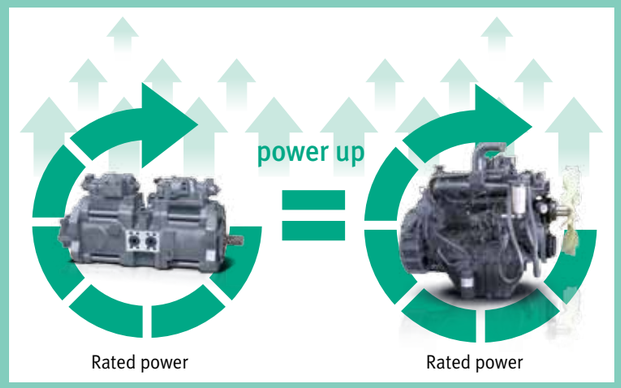
OPTIMIZED LEVER CONTROL

ENGINE PUMP MATCHING

1. It is common that response time of the system (time for generating rated power from the minimum power) is slower than response speed of the pump. In such a case, the pump is kept in standby mode until the engine reaches the rated power to cause unnecessary fuel consumption. In addition, more fuel is supplied to the engine for matching the pump speed with the engine to result in more exhaust fumes.

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

ENGINE PUMP MATCHING



Market No.1 Fuel Efficiency in Middle Excavator.

"NEW CONTROL LOGIC" for Better Fuel Efficiency

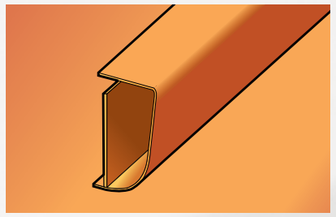
FUEL EFFICIENCY
↑17% BETTER

FUEL CONSUMPTION
↓15% SAVING

Reliability

The reliability of an item of plant contributes to its overall lifetime operating costs. 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.

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

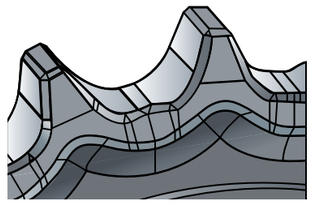


X-CHASSIS. The X-chassis frame section has been designed using finite element and 3-dimensional computer simulation, to ensure greater durability and optimum structural integrity. The swing gear is solid and stable.

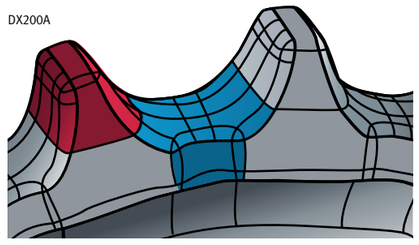
SINTERED BUSHING. A highly lubricated metal sintered bushing is used for all front pivot points in order to increase the lifetime and durability. Extend the greasing intervals to 250 hours. (except bucket parts)

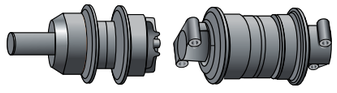
SPROCKET. Doosan equipment is designed with optimal sprocket to move from one jobsite to another. Teeth are thick to prevent breaking and designed in low profile to minimize wear caused by body pitching during traveling.

Previous model



DX200A





Upper Roller Lower Roller

ROLLER. The rollers used in the undercarriage of Doosan equipments feature unparalleled durability. The gaps between the rollers are minimized to prevent foreign materials from entering, and the impact dispersion design further improves the durability.

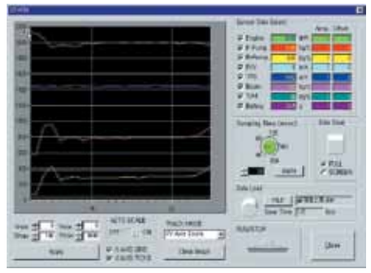
DOOSAN'S EQUIPMENT IS COATED WITH SUPER DOOSAN ORANGE PAINT

A specially developed paint for enhanced visibility at long distances, the paint provides excellent physical coating properties providing protection in extreme environments. It does not fade in sunlight or UV either. The paint is non-toxic, eco-friendly, and does not have a high metal content. Doosan's management philosophy is committed to environmental protection.

Maintenance

Short maintenance operations at long intervals increase the availability of the equipment on site. DOOSAN has developed the DX200A with a view to high profitability for the user.

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.



PC MONITORING (DMS). A PC monitoring function enables connection to the e-EPOS™ 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.

CENTRALIZED GREASE INLETS FOR EASY MAINTENANCE. The arm grease inlets are grouped for easy access.

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.

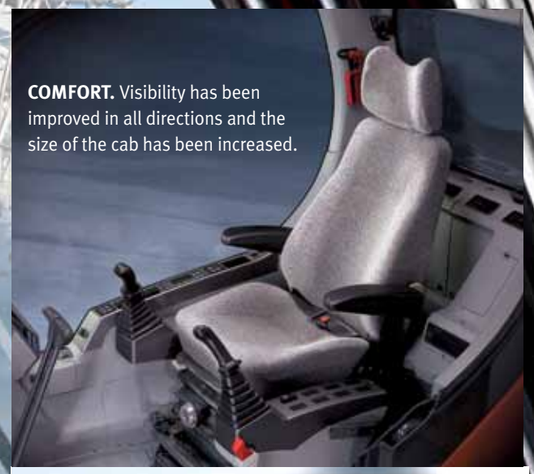
ENGINE OIL FILTER. The engine oil filter offers a high level of filtration allowing the oil change interval to be increased to 500 hours. It is easy to access and is positioned to avoid contaminating the surrounding environment.

WATER SEPARATOR. High efficiency and large capacity water separator protect the engine by removing most moisture from the fuel (additional water separator as strandard)

CONVENIENT FUSE BOX. The fuse box is conveniently located in a section of the storage compartment behind the operator's seat providing a clean environment and easy access.

Handling & Comfort

Short maintenance operations at long intervals increase the availability of the equipment on site. DOOSAN has developed the DX200A with a view to high profitability for the user.



COMFORT. Visibility has been improved in all directions and the size of the cab has been increased.

CHOICE OF OPERATING MODES.

Working mode

- Power : uses 100% engine power for heavy work
- Standard : uses 85% engine power for all work
- Economy : uses 70% engine power for light work

Comfortable 2-stage sliding seat

Control stand (Telescopic Function)

CONTROL PANEL. Correct positioning with clear controls makes the operator's task easier.

CONTROL LEVER. Levelling operations and the movement of lifted loads in particular are made easier and safer. The control levers have additional electrical buttons for controlling other additional equipment (for example, grabs, crushers, breakers, etc.)

AIR CONDITIONING. The high performance air conditioning provides an air flow which is adjusted and electronically controlled for the conditions. Five operating modes enable even the most demanding operator to be satisfied.

Technical Specification

Engine

MODEL
DOOSAN DB58TIS
4 valves per cylinder, vertical injectors, water cooled,
turbo charged with air to air intercooler. The emission levels are
well below the values required for Tier II.

TYPE
WATER-COOLED, 4-CYCLE DIRECT

NUMBER OF CYLINDERS
6

NOMINAL FLYWHEEL POWER
GROSS POWER : 115 kW(157 PS, 154 HP) @1,900rpm (SAE J1995)
NET POWER : 110 kW(150 PS,148 HP) @1,900rpm (SAE J1349)

MAX TORQUE
61.5 kgf.m (603 Nm) @ 1,400 rpm

PISTON DISPLACEMENT
5,785 cc (353 cu.in)

BORE & STROKE
102 mm x 118 mm

STARTER
24 V / 4.5 kW

BATTERIES
2 x 12 V / 100 Ah

AIR CLEANER
Double element with auto dust evacuation.

Hydrauric System

The heart of the system is the e-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 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 Liter/min
Displacement : 2 x 117.0 cc/rev
Weight : 117 kg

PILOT PUMP
Gear Pump - Max Flow Rate : 28.5 Liter/min
Displacement : 15 cc/rev
Relief valve Pressure : 40 kgf/cm²

MAXIMUM SYSTEM PRESSURE
Boom/arm/Bucket: 350 kgf/cm²(343 bar)
Travel : 350 kg/cm²
Swing : 270 kgf/cm²(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 shock-free operation and extend piston life.

CYLINDERS	QUANTITY	BORE X ROD DIAMETER X STROKE
Boom	2	120 x 85 x 1,260
Arm	1	135 x 95 x 1,450
Bucket	1	120 x 80 x 1,060

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	2ea
Lower rollers	7ea
Track shoes	45ea
Track length	4,065mm

Environment

Noise levels comply with environmental regulations (dynamic values).

SOUND LEVEL GUARANTEE
103 dB(A) (2000/14/EC)

CAB SOUND LEVEL
73 dB(A) (ISO 6396)

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.

TYPE	AXIAL PISTON
SWING SPEED	11.3 rpm
MAX SWING TORQUE	6,460 kgf.m

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 counter-rotation on demand.

TRAVEL SPEED (FAST/SLOW)	3.2 / 5.8 km/hr
MAXIMUM TRACTION FORCE	23.1 / 12.2 ton
MAXIMUM GRADE	70%

Refill Capacities

FUEL TANK
400l (105.7 US gal, 88 lmp gal)

COOLING SYSTEM (RADIATOR CAPACITY)
24l (6.3 US gal, 5.3 lmp gal)

ENGINE OIL
27l (7.1 US GAL, 5.9 LMP GAL)

SWING DEVICE
5l (1.32 US gal, 1.1 lmp gal)

TRAVEL DEVICE
3.3l (0.87 US gal, 0.73 lmp gal)

OIL TANK
240l (63.4 US GAL, 52.8 LMP GAL)

Weight

SHOE WIDTH (mm)	GROUND PRESSURE (kgf/cm²)	MACHINE WEIGHT (ton)
STD. 600G	0.48	20,600 kg (45,415 lb)
OPT. 800G	0.37	21,120 kg (46,561 lb)

Digging force (ISO)

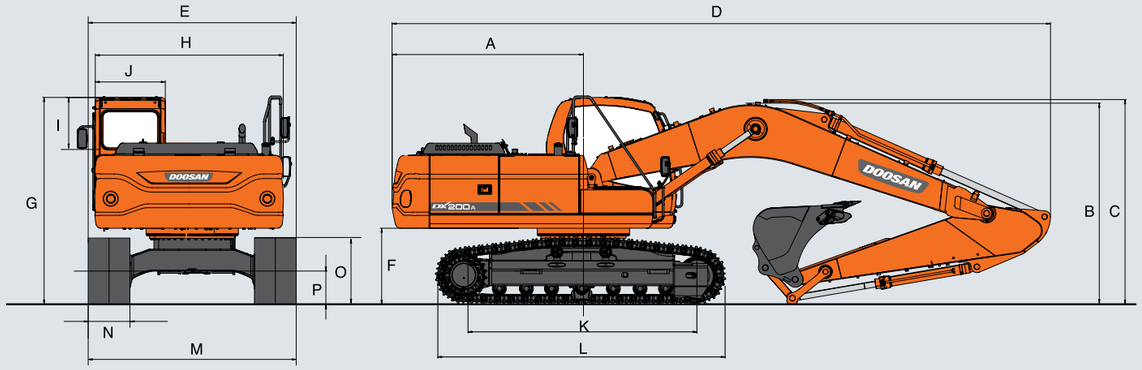
		Boom : 5,700 mm Arm : 2,900 mm Bucket : 0.92m³ - CW : 3.8t	Boom : 5,700 mm Arm : 2,400 mm Bucket : 0.92m³ - CW : 3.8t	Boom : 5,700 mm Arm : 2,900 mm Bucket : 0.81m³ - CW : 3.8t	Boom : 5,700 mm Arm : 2,400 mm Bucket : 0.81m³ - CW : 3.8t
Bucket	t	15.2	15.2	15.2	15.2
	kN	151	151	151	151
Arm	t	10.8	12.6	10.8	12.6
	kN	108	125	108	125

Bucket

Bucket Type	Capacity (m3)		Width (mm)		Weight (kg)	C/W (ton)	3.8	
	SAE/PCSA	CECE	W/O Cutter	With Cutter		SHOE (mm)	600	
							5.7m Boom	
							2.4m A	2.9m A
GP	0.81	0.72	1,064	1,126	654		A	A
	0.92	0.81	1,172	1,236	707		A	B
Maximum load pin-on(payload+bucket)							2829	2586

Based on ISO 10567 and SAE J296, arm length without quick change clamp
A : Suitable for materials with density of 2,100kg/m³ (3500lb/yd³) or less
B : Suitable for materials with density of 1,800kg/m³ (3000lb/yd³) or less
C : Suitable for materials with density of 1,500kg/m³ (2500lb/yd³) or less
D : Suitable for materials with density of 1,200kg/m³ (2000lb/yd³) or less
- : Not recommended

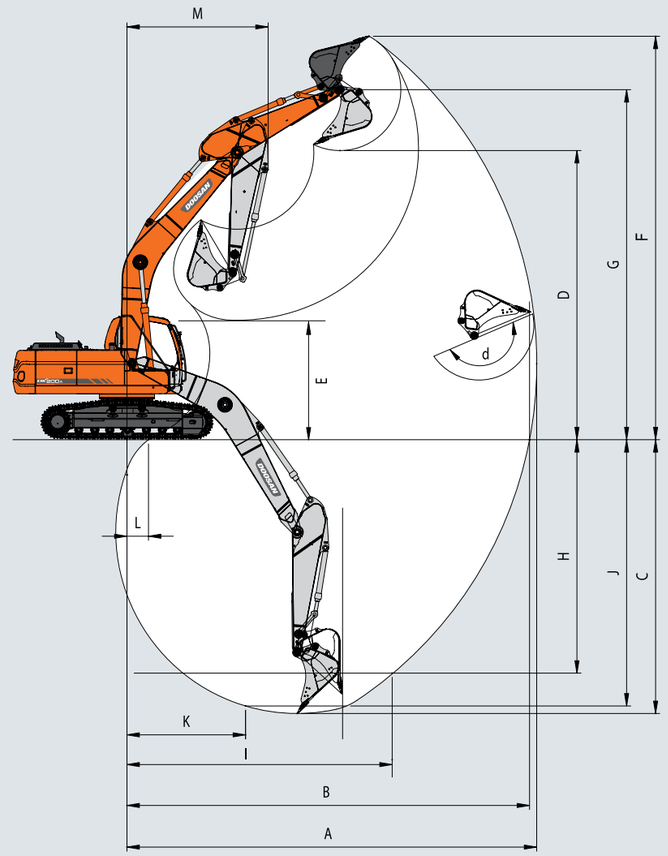
Dimensions



Dimensions

BOOM TYPE (ONE PIECE)	(mm)		5,700	
ARM TYPE	(mm)		2,900	2400
BUCKET TYPE (PCSA)	(m^3)		0.92	1.05
TAIL SWING RADIUS	(mm)	N	2,750	←
SHIPPING HEIGHT (BOOM)	(mm)	O	2,940	3,045
SHIPPING HEIGHT (HOSE)	(mm)	P	3,005	3,110
SHIPPING LENGTH	(mm)	Q	9,485	9,500
SHIPPING WIDTH	(mm)		2,800	←
C/WEIGHT CLEARANCE	(mm)	S	1,055	←
HEIGHT OVER CAB.	(mm)	T	2,975	←
HOUSE WIDTH	(mm)	U	2,710	←
CAB. HEIGHT ABOVE HOUSE	(mm)	V	845	←
CAB. WIDTH	(mm)	W	960	←
TUMBLER DISTANCE	(mm)	X	3,650	←
TUMBLER DISTANCE	(mm)		3,270	←
TRACK LENGTH	(mm)	Y	4,445	←
TRACK LENGTH	(mm)		4,065	←
UNDERCARRIAGE WIDTH	(mm)	Z	2,990	←
UNDERCARRIAGE WIDTH	(mm)		2,800	←
SHOE WIDTH	(mm)	a	600	←
TRACK HEIGHT	(mm)		947	←
CAR BODY CLEARANCE	(mm)	c	480	←

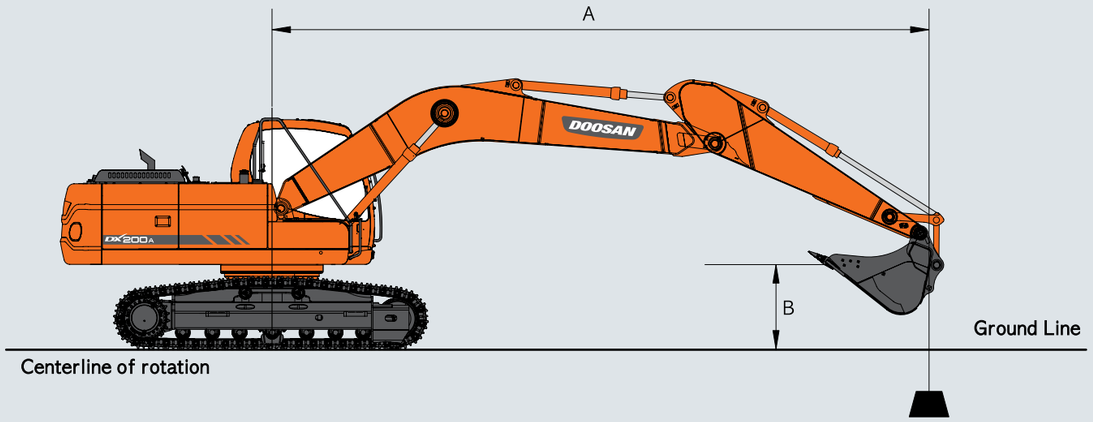
Working Ranges

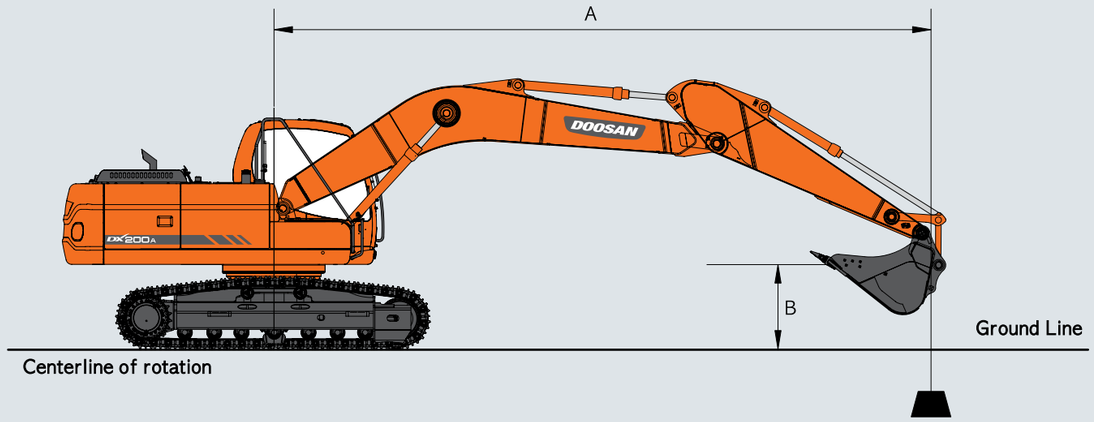


Working Ranges

BOOM TYPE (ONE PIECE)	(mm)		5,700	
ARM TYPE	(mm)		2,900	2,400
BUCKET TYPE (PCSA)	(m^3)		0.92	1.05
MAX. DIGGING REACH	(mm)	A	9,900	9,480
MAX. DIGGING REACH (GROUND)	(mm)	B	9,730	9,300
MAX. DIGGING DEPTH	(mm)	C	6,620	6,110
MAX. LOADING HEIGHT	(mm)	D	6,990	6,830
MIN. LOADING HEIGHT	(mm)	E	2,555	3,070
MAX. DIGGING HEIGHT	(mm)	F	9,750	9,630
MAX. BUCKET PIN HEIGHT	(mm)	G	8,450	8,299
MAX. VERTICAL WALL DEPTH	(mm)	H	5,640	5,390
MAX. RADIUS VERTICAL	(mm)	I	6,410	6,050
MAX. DEPTH TO 8' LINE	(mm)	J	6,430	5,910
MIN. RADIUS 8' LINE	(mm)	K	2,865	2,880
MIN. DIGGING REACH	(mm)	L	519	1,698
MIN. SWING RADIUS	(mm)	M	3,410	3,410
BUCKET ANGLE	(deg)	d	166	166

Lifting Capacity





Option 1

Boom : 5.7m Arm : 2.9m SHOE : 600mm STD TRACK

Unit : 1,000kg

A(m) / B(m)	1		2		3		4		5		6		7		8		Max. Reach		
																			A(m)
8																	3	3	@5.95
7																	2.82	2.82	@6.86
6											4.02	4.02	3.86	3.18			2.75	2.75	@7.51
5											4.3	4.15	4.11	3.12			2.75	2.39	@7.99
4									5.27	5.27	4.72	3.98	4.35	3.03	3.58	2.34	2.8	2.15	@8.32
3					*10.65	*10.65	*7.60	7.3	6.1	5.11	5.23	3.79	4.43	2.91	3.51	2.27	2.92	2	@8.52
2					*8.55	*8.55	*8.98	6.75	6.93	4.8	5.54	3.6	4.3	2.79	3.43	2.2	3.02	1.91	@8.60
1					*7.27	*7.27	*9.97	6.34	7.18	4.54	5.35	3.43	4.18	2.68	3.36	2.13	3	1.88	@8.56
0(GROUND)			*4.93	*4.93	*8.28	*8.28	10.16	6.12	6.97	4.36	5.21	3.3	4.09	2.59	3.3	2.08	3.05	1.91	@8.40
-1			*7.18	*7.18	*10.09	9.77	10.04	6.02	6.86	4.26	5.13	3.22	4.03	2.54	3.27	2.05	3.2	2.01	@8.11
-2	*8.27	*8.27	*9.39	*9.39	*12.45	9.83	10.03	6.01	6.82	4.23	5.09	3.19	4.01	2.52			3.49	2.19	@7.68
-3	*10.29	*10.29	*11.87	*11.87	*12.31	9.97	*9.56	6.07	6.86	4.26	5.12	3.22	4.05	2.56			3.98	2.51	@7.09
-4			*14.26	*14.26	*10.72	10.19	*8.45	6.21	6.78	4.35	5.22	3.31					4.88	3.1	@6.27
-5					*8.37	*8.37	*6.67	6.43	5.19	4.54							4.96	4.36	@5.14

1. Ratings are based on SAE J1097
2. Load point is the end of arm.
3. * Rated loads are based on hydraulic capacity.
4. Rated loads do not exceed 87% of hydraulic capacity or 75% of tipping capacity.

: Rating Over Front
: Rating Over Side or 360 degree

Option 2

Boom : 5.7m Arm : 2.4m SHOE : 600mm STD TRACK

Unit : 1,000kg

A(m) / B(m)	2		3		4		5		6		7		8		Max. Reach		
																	A(m)
8															*4.18	*4.18	@5.33
7									*4.48	4.23					*3.91	3.84	@6.31
6									*4.50	4.2	*3.89	3.14			*3.80	3.11	@7.03
5							*5.15	*5.15	*4.75	4.1	*4.51	3.1			*3.79	2.68	@7.54
4			*9.25	*9.25	*7.00	*7.00	*5.84	5.34	*5.15	3.94	4.54	3.02			3.67	2.4	@7.89
3					*8.43	7.1	*6.64	5.03	*5.63	3.77	4.43	2.91	3.52	2.29	3.44	2.23	@8.10
2					*9.68	6.61	*7.40	4.75	5.52	3.59	4.31	2.8	3.46	2.23	3.33	2.14	@8.18
1					10.35	6.29	7.15	4.53	5.36	3.45	4.21	2.71	3.4	2.17	3.31	2.11	@8.14
0(GROUND)			*7.25	*7.25	10.18	6.15	7	4.39	5.25	3.35	4.13	2.64			3.38	2.15	@7.97
-1	*7.02	*7.02	*10.03	9.96	10.13	6.11	6.93	4.33	5.19	3.29	4.1	2.61			3.58	2.27	@7.67
-2	*10.04	*10.04	*12.71	10.06	*9.98	6.14	6.93	4.33	5.19	3.29	4.11	2.62			3.94	2.51	@7.21
-3	*13.33	*13.33	*11.43	10.23	*9.12	6.24	7	4.39	5.24	3.34					4.59	2.94	@6.57
-4	*12.02	*12.02	*9.57	*9.57	*7.74	6.41	*6.21	4.52							*5.20	3.76	@5.68
-5					*5.42	*5.42									*4.84	*4.84	@4.39

1. Ratings are based on SAE J1097
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3. * Rated loads are based on hydraulic capacity.
4. Rated loads do not exceed 87% of hydraulic capacity or 75% of tipping capacity.

: Rating Over Front
: Rating Over Side or 360 degree

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