

DOOSAN

Construction Equipment

DX190W

Engine Power	SAE J1349, net 116 kW (156 HP) @ 1,900 rpm
Operational Weight	17,800 ~ 19,400 kg (39,242 ~ 42,770 lb)
Bucket Capacity (SAE/PCSA)	0.38 ~ 0.93 m ³ (0.5 ~ 1.21 yd ³)



DOOSAN DX190W HYDRAULIC EXCAVATOR : A NEW MODEL WITH NOVEL FEATURES

DX190w

THE NEW DX190W HYDRAULIC EXCAVATOR HAS ALL THE ADVANTAGES OF THE PREVIOUS MODEL, AND NOW OFFERS ADDITIONAL ADDED VALUE TO THE OPERATOR.

The new DX190W was developed with the concept of “providing optimum value to the end user.” In concrete terms, this translates, into :

INCREASED PRODUCTION AND IMPROVED FUEL ECONOMY are attributed to the electronic optimization of the hydraulic system and the new generation DOOSAN engine (Tier III/ Stage III).

IMPROVED ERGONOMICS, increases comfort and excellent all round visibility ensuring a safe and pleasant working environment.

IMPROVED RELIABILITY, is achieved through the use of high performance materials combined with new methods of structural stress analysis, and leads to increased component life expectancy, thus reducing running costs.





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 competitors



ADVANCED H-CLASS BUCKET

- Doosan new H-class bucket has the best strength of steel & the optimized design
- Add side cutter / add chamfer and inner plate at member part
- Increase bucket solidity and change casting type



ADVANCED HD CABIN (OPTIONAL)

- ROPS, FOPS optional
- The latest interior (MP3, Joystick, Air suspension seat, etc.)



7 INCH MONITOR

- New, user-friendly LCD color monitor with full access to machine settings and maintenance data.
- Operator can see rear view through new monitor (If customer selects rear view camera option)



TROPICAL HYDRAULIC OIL (ISO VG 68)

- Maintain best performance of your machine by keeping optimum viscosity in tropical area.



PERFORMANCE & PRODUCTIVITY

DX190W

The performance of the DX190W has a direct effect on its productivity. Its new "Common Rail" engine and new EPOS™ controlled hydraulic system have combined to create an unbeatable hydraulic excavator, with a cost/performance ratio that makes the DX190W even more appealing.

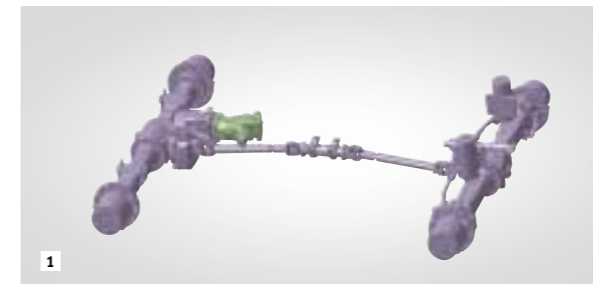
DOOSAN ENGINE (DL06)

At the heart of the hydraulic excavator is the new "Common Rail" DOOSAN DL06 engine. It is combined with the new EPOS™ electronic control system, for optimum power and fuel saving.

The new engine produces 156 hp(116 kw/158 PS) at only 1,900 rpm, and more torque, due to its careful design combined with the use 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.



1 NEW DRIVE LINE CONCEPT

The new travel motor and transmission control in the drive line provide comfortable travel due to increased smoothness, improved hydraulic retarding and improved gear shifting.

HEAVY DUTY AXLES

The front axle offers wide oscillating and steering angles. The transmission is mounted directly on the rear axle for protection and optimum ground clearance.

ADVANCED DISC BRAKE SYSTEM

The new disc brake system works directly on the hub instead of the drive shaft to avoid planetary gear backlash. This eliminates the rocking effect associated with working free on wheels. The new axle is designed for low maintenance and the oil change intervals have been increased from 1,000 to 2,000 hours further reducing owning and operating costs.

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.

2 UNDERCARRIAGE DESIGN

A rigid, welded frame provides excellent durability. Efficient hydraulic lines routing, transmission protection and heavy duty axles make the undercarriage perfect for wheel excavator applications. Both outriggers and dozer blade are pin type for maximum flexibility. An optional work tool restraint bar is available.

3 OUTRIGGERS

The pin type design allows the outriggers to be mounted on the front and/or rear for maximum operating stability when digging or lifting and are individually controlled for leveling on slopes.

4 DOZER BLADE

The pin type design allows the dozer blade to be mounted on the front and/or rear and is used for leveling, clean-up work and for stabilizing the machine during digging applications. The large dozer bottom and parallel design provide minimized ground pressure.

HYDRAULIC PUMP

Considering the property of wheel excavator that intensively performs traveling operation, bent axis piston pump is adopted for its high efficiency and excellent response in high pressure. The Main pump has a capacity of 2x200l/min(@ 1,900rpm) reducing cycle time while a high capacity gear pump improves pilot line efficiency.

SWING DRIVE

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





DURABILITY & RELIABILITY

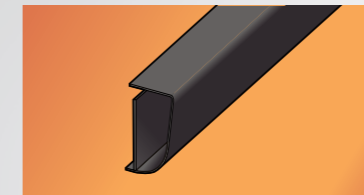
DX190W

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.



STRESS ANALYSIS DESIGN(FEM) AND INNOVATIVE MANUFACTURING TECHNIQUE PROVIDE A STRONG AND STABLE UNDERCARRIAGE

As Chassis Frame, Outrigger Frame and Dozer Blade are designed by interpretative technique and reliability test using 3 dimension CAD tool, durability and reliability are improved.



1 ADVANCED BUSHING

A highly lubricated metal is used for the boom pivot in order to increase the lifetime and extend the greasing intervals to 250 hours. A rolled bushing, with very fine grooves, has been added to the arm, bucket, dozer, and outrigger pivot; so greasing is only required every 50 hours.

2 POLYMER SHIM

A polymer shim is added to the bucket, dozer, and outrigger pivot to promote extended pin and bushing life.

3 DOZER & OUTRIGGER CYLINDERS PROTECTION COVERS

Large reinforced protective covers have been adopted to completely protect the Dozer & Outrigger cylinders from falling stones etc, while the machine is operating.

4 CAST COUNTERWEIGHT

A Cast Counterweight has been adopted to minimize deformation by external impact. In addition, operating stability has been increased by use of a low center of gravity design.

5 LED (LUMINESCENT DIODE) TYPE STOP LAMPS

The use of LED type Stop Lamps ensures considerably improved average service life compared to the existing standard filament bulbs. Furthermore, the faster lighting speed helps contribute to accident prevention.



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 DX190W prevents transfer of unnecessary flow to maintain powerful working level at the maximum value while reducing consumption of fuel.



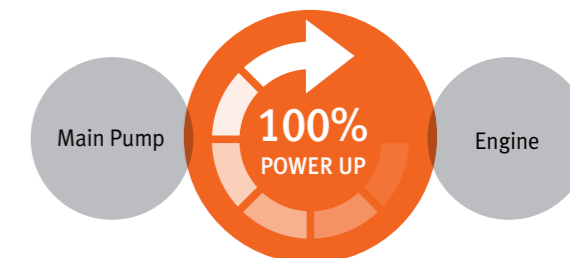
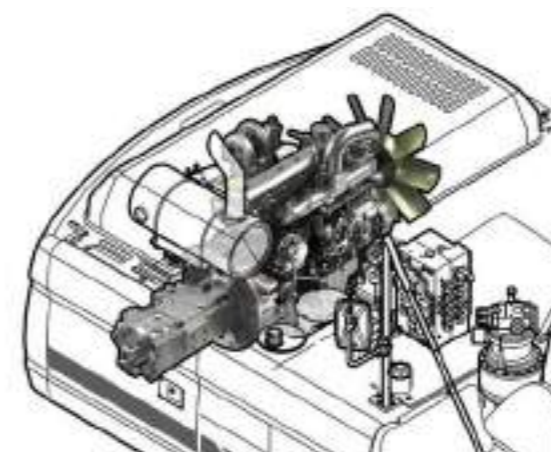
OPTIMIZED LEVER CONTROL & AUTO IDLE

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 responses 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

DX190W

The work rate of the hydraulic excavator is directly linked to the performance of its operator. DOOSAN designed the DX190W by putting the operator at the centre of the development goals. The result is significant ergonomic value that improves the efficiency and safety of the operator.



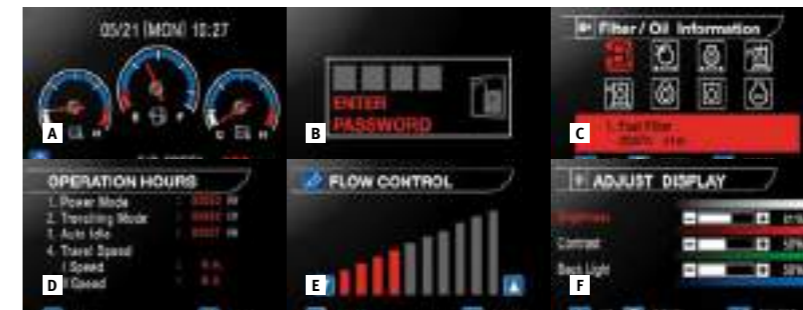
MONITOR



3 power modes for maximum efficiency
- Power mode
- Standard mode
- Economy mode

3 work modes to suit your application
- 1-way mode
- 2-way mode
- Digging mode

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



CONTROL PANEL

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



1 STEERING COLUMN

The Forward/Neutral/Reverse & gear selection switch is mounted on the steering column to minimize operator movements while traveling so that safety and operator comfort are ensured. The lower part of Steering Column can be tilted for improved operator comfort.

2 DOZER/OUTRIGGER CONTROL

The Dozer/Outrigger Control Lever, combined with the associated switches, allows for the operator to select between any combination of independent or simultaneous operation of the dozer/ Outriggers.

3 FOOT PEDALS

The position of the Option, Brake and Accelerator Pedal have been set by ergonomic analysis to maximise operating efficiency while minimizing foot movement. The required pedal operating forces have also been decreased to reduce fatigue.

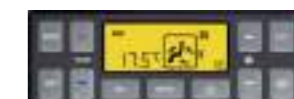
4 COMFORTABLE 2-STAGE SLIDING SEAT

5 CONTROL STAND (TELESCOPIC & TILTING FUNCTION)

6 REAR CAMERA

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.



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 DX225LCA 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.

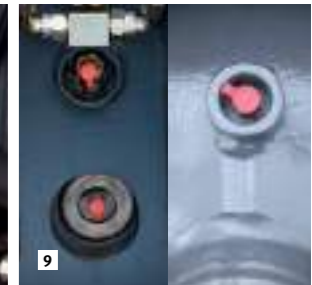
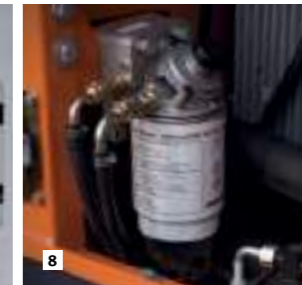
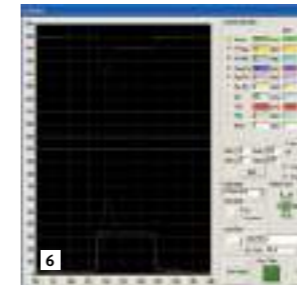
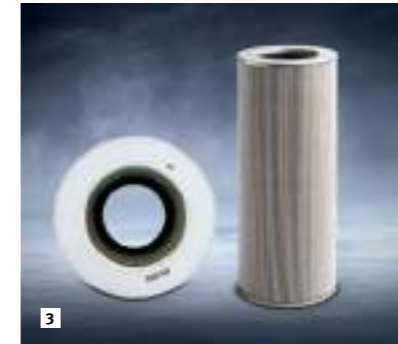




EASY MAINTENANCE

DX190W

Short maintenance operations at long intervals increase the availability of the equipment on site. DOOSAN has developed the DX190W with a view to high profitability for the user.



1 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.

2 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.

3 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.

4 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.

5 TOOL BOX AND STORAGE PLACES

A large sized and lockable tool box is mounted on the left side of undercarriage and the storage places for grease can be provided in the right side of undercarriage.

6 PC MONITORING (DMS)

A PC monitoring function enables connection to the 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.

7 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.

8 FUEL PRE-FILTER

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.

9 CENTRALIZED FRONT AXLE PIN GREASE INLETS FOR EASY MAINTENANCE

The grease lubricating position of front axle pin is located in front of equipment for easy accessibility.

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

TELEMATICS SERVICE (OPTIONAL)

GLOBAL PARTS NETWORK

TELECOMMUNICATIONS

Data flow from machine to web




TELEMATICS SERVICE TERMINAL

Telematics Service terminal is installed to machine / connected to EPOS™



TELECOMMUNICATION

GPS, EPOS™ data is sent to designated server by GSM, Satellite telecommunication

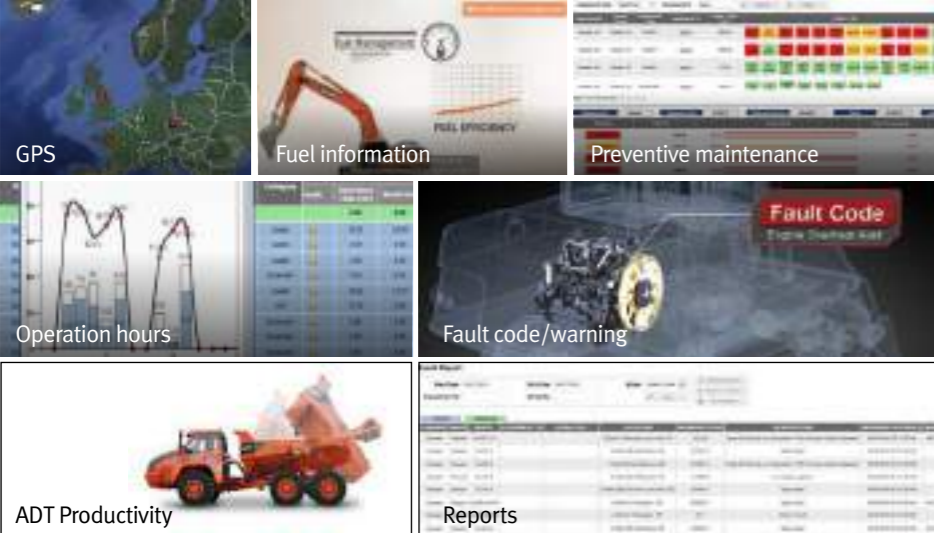


DOOSAN TELEMATICS SERVICE WEB

Doosan, Dealer, Customer can easily monitor the GPS, EPOS™ data from Core Telematics Service 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

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 developing new machine

FUNCTION	EXCAVATOR	WHEEL LOADER	ADT
GPS	All models	All models	All models
E-mail reports	All models	All models	All models
Operation hours	All models	All models	All models
Maintenance parts	All models	Tier 4 only	All models
Fault code/ Warning	All models	Tier 4 only	All models
Fuel information	All models	Tier 4 only	All models
Dump capacity	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.



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 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**
-  **Shortest distance/time parts delivery**
-  **Real-time service support**
-  **Minimum downtime**

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. 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 construction equipment market and is 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.



데이터요정

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 m ³

DEMOLITION



	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	FP14	1,100 kg	680 mm	51 t
ROTATING CRUSHER	RC14	1,250 kg	720 mm	51 t

MATERIAL HANDLING



	Model	Weight	Max Jaw opening	Max. Closing Force	Capacity	
MULTI-GRAPPLE	MG14	1,050 kg	1,744 mm	4.6 t	0.45 m ³	
STONE GRAPPLE	SG18	861 kg	1,800 mm	-	0.34 m ³	
WOOD GRAPPLE	L / P	WG18	800 / 730 kg	1,800 mm	-	0.48 m ³
LOG GRAPPLE	L / P	LG18	935 / 910 kg	1,800 mm	-	0.42 m ³
ORANGE GRAPPLE	OG22	1,300 kg	2,150 mm	-	0.50 m ³	

L : Link type
P : Pendulum type

EARTH MOVING



	Model	Weight	Max. Jaw opening	Capacity
CLAMSHELL BUCKET	CB18	1,200 kg	1,455 mm	0.70 m ³
	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)
QUICK COUPLER	QC22	319 kg	80 mm	445 ~ 514 mm

TECHNICAL SPECIFICATIONS

ENGINE

Model
Doosan DL06 “Common Rail” engine with direct fuel injection and electronic control, 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 stage III.
Number of cylinders
6
Nominal flywheel power
116 kW(156HP) @ 1,900 rpm (SAE J1349, net)
Max torque
70 kgf.m(686 Nm) at 1,400 rpm
Piston displacement
5,890 cc (359 cu.in)
Bore & stroke
Φ100 mm x 125 mm (3.9” X 4.8”)
Starter
24 V / 4.5 kW
Batteries
2 x 12 V / 100 Ah
Air cleaner
Double element with auto dust evacuation.

DRIVE

Fully hydrostatic driven, 3 speed power shift transmission, variable displacement, high torque, axial piston motor, foot pedal controls provide smooth travel, hub reduction type front steering axle and rear rigid axle.

Travel speed (High)
36 km/h (22.4 mph)
Maximum traction force
11,075 kgf (24,416 lbf)
Maximum grade
35° / 70%

WEIGHT

Operating weight, including 5,200 mm (17’1”) one-piece boom and 2,600 mm (8’6”) one-piece boom, or 1,940+3,820 mm (6’4” + 12’6”) two-piece boom, 2,300mm (7’7”) arm, operator, lubricant, coolant, full fuel tank and the standard equipment. Weights are with 616kg (1,358 lb) bucket.

Undercarriage type		Operating weight (One-piece Boom)	Operating weight (Two-piece Boom)
Front attach	Rear attach		
Cradle	Dozer	17,770 kg (39,176 lb)	18,270 kg (40,278 lb)
Cradle	Outrigger	17,920 kg (39,507 lb)	18,410 kg (40,587 lb)
Dozer	Outrigger	18,850 kg (41,557 lb)	19,330 kg (42,615 lb)
Outrigger	Dozer	18,910 kg (41,689 lb)	19,390 kg (42,748 lb)
Outrigger	Outrigger	19,050 kg (41,998 lb)	19,530 kg (43,056 lb)

HYDRAULIC 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 new e-EPOS is connected to the engine electronic control via a data transfer link to harmonize the operation of the engine and hydraulics.

- The hydraulic system enables independent or combined operations.
- 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 200 l/min (2 X 52.8US gpm, 2 X 44 Imp gpm)
Pilot pump
Gear pump - max flow: 26.1 l/min (6.9US gpm, 5.7 Imp gpm)
Maximum system pressure
Boom/arm/Bucket : Normal mode : 330 kgf/cm ² (324 bar) Power mode : 350 kgf/cm ² (343 bar) Travel : 350 kgf/cm ² (343 bar) Swing : 270 kgf/cm ² (265 bar)

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 10.9 rpm

UNDERCARRIAGE

Heavy-duty frame, all-welded stress-relieve structure. Top grade materials used for toughness. Specially heat-treated connecting pins. 10.0-20-14PR double tires with tire spacer. Front axle oscillating hydraulically. Dozer and outrigger can be installed in front and rear interchangeably. 18.0-19.5-20PR tubeless single and 10.0-20-16PR double tires as an option.

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.

[One-piece Boom]		
Cylinders	Quantity	Bore x Rod diameter x stroke
Boom	2	120 X 85 X 1,195mm(4.7” X 3.3” X 3’11”)
Arm	1	125 X 90 X 1,470mm(4.9” X 3.5” X 4’10”)
Bucket	1	115 X 80 X 1,025mm(4.5” X 3.1” X 3’4”)
[Two-piece Boom]		
Cylinders	Quantity	Bore x Rod diameter x stroke
Boom	2	120 X 85 X 1,030mm(4.7” X 3.3” X 3’5”)
Two-piece Boom 1	1	160 X 95 X 760mm(6.3” X 3.7” X 2’6”)
Arm	1	125 X 90 X 1,470mm(4.9” X 3.5” X 4’10”)
Bucket	1	115 X 80 X 1,025mm(4.5” X 3.1” X 3’4”)

ENVIRONMENT

Noise levels comply with environmental regulations (dynamic values).

LwA External sound level
101 dB(A) (2000/14/EC)
LPA Operator sound level
74 dB(A) (ISO 6396)

REFILL CAPACITIES

Fuel tank
310 l (81.9 US gal, 68.2 Imp gal)
Cooling system (Radiator capacity)
24 l (6.3 US gal, 5.3 Imp gal)
Engine oil
25 l (6.6 US gal, 5.5 Imp gal)
Swing drive
3.8 l (10 US gal, 0.8 Imp gal)
Power train(each)
Front Axle 2.5 l (0.66 US gal, 0.55 Imp gal)
Rear Axle 2.5 l (0.66 US gal, 0.55 Imp gal)
Transmission 2.5 l (0.66 US gal, 0.55 Imp gal)

Hydraulic system
205 l (54.2 US gal, 45.1 Imp gal)
Hydraulic tank
116 l (51.7 US gal, 43.1 Imp gal)

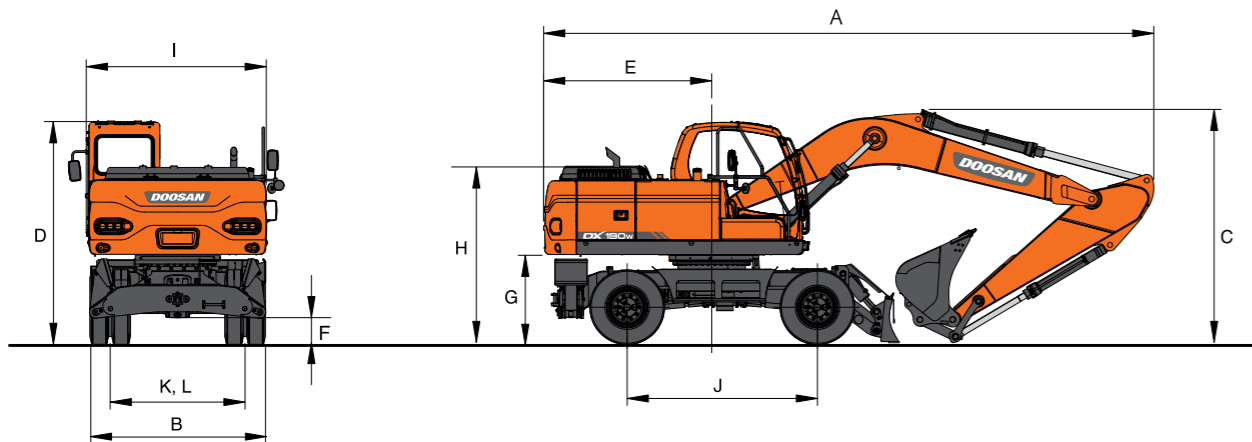
BUCKET

Capacity		Width		Weight	Recommendation				
					5,200mm (17’1”) One-piece Boom			5,360mm (17’7”) Two-piece Boom	
PCSA, heaped	CECE heaped	Without side cutters	With side cutters		2,200mm (7’3”)Arm	2,600mm (8’6”)Arm	3,100mm (10’2”)Arm	2,300mm (7’7”)Arm	2,600mm (8’6”)Arm
0.38m ³ (0.5yd ³)	0.35m ³	604mm (2’)	640mm (2’1”)	441 kg (972 lb)	A	A	A	A	A
0.45m ³ (0.59yd ³)	0.41m ³	727mm (2’5”)	775mm (2’7”)	465 kg (1,025 lb)	A	A	A	A	A
0.57m ³ (0.75yd ³)	0.51m ³	865.2mm (2’10”)	913.2mm (3’)	520 kg (1,146 lb)	A	A	B	A	A
0.70m ³ (0.92yd ³)	0.62m ³	1,015mm (3’4”)	1,063mm (3’6”)	567 kg (1,250 lb)	A	B	C	A	A
0.76m ³ (1yd ³)	0.67m ³	1,079mm (3’6”)	1,127mm (3’8”)	602 kg (1,327 lb)	B	B	C	A	B
0.8m ³ (1.05yd ³)	0.7m ³	1,123mm (3’8”)	1,171mm (3’10”)	616 kg (1,358 lb)	B	C	-	B	C
0.93m ³ (1.22yd ³)	0.81m ³	1,267mm (4’2”)	1,315mm (4’4”)	664 kg (1,332 lb)	C	-	-	C	-

A. Suitable for materials with density of 2,000 kg/m³ (3,370 lb/cu•yd) or less
 B. Suitable for materials with density of 1,600 kg/m³ (2,700 lb/cu•yd) or less
 C. Suitable for materials with density of 1,100 kg/m³ (1,850 lb/cu•yd) or less

DIMENSIONS

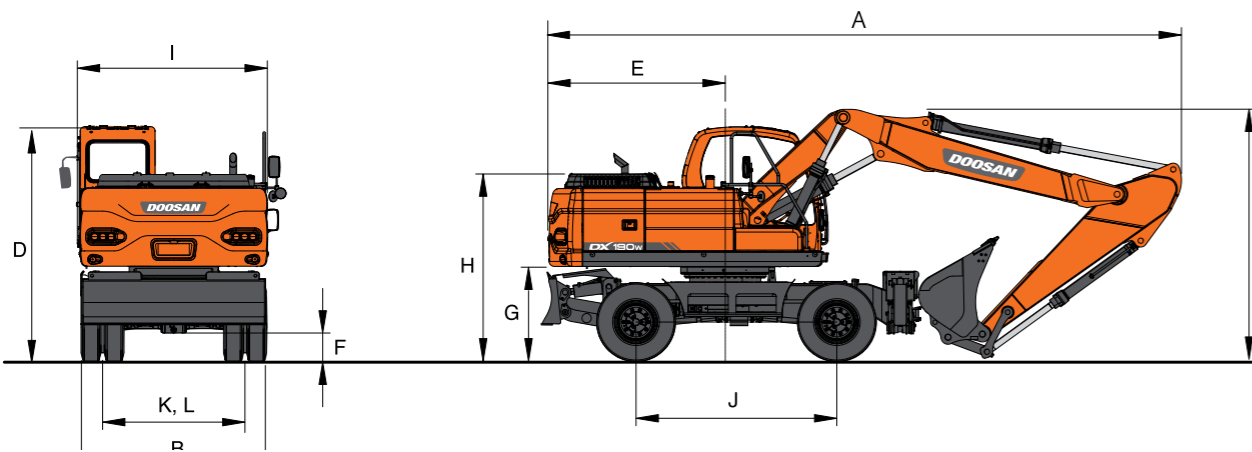
[One-piece Boom]



DIMENSIONS

Boom type (One-piece)	5,200mm(17'1")		
Arm type	2,400mm(8'6")	2,600mm(8'6")	3,100mm(10'2")
A Shipping Length	8,715mm(28'7")	8,659mm(28'5")	8,507mm(24'6")
B Shipping Width	→	2,496mm(8'2")	←
C Shipping Height (Boom)	3,212mm(10'6")	3,310mm(10'10")	3,772mm(12'5")
D Height Over Cab.	→	3,135mm(10'3")	←
E Counter Weight Swing Clearance	→	2,450mm(8')	←
F Ground Clearance	→	350mm(1'2")	←
G Counter Weight Clearance	→	1,249mm(4'1")	←
H Engine Cover Height	→	2,530mm(8'4")	←
I Upper Housing Width	→	2,494mm(8'2")	←
J Wheel Base	→	2,700mm(8'10")	←
K,L Tread Width	→	1,944mm(6'5")	←

[Two-piece Boom]

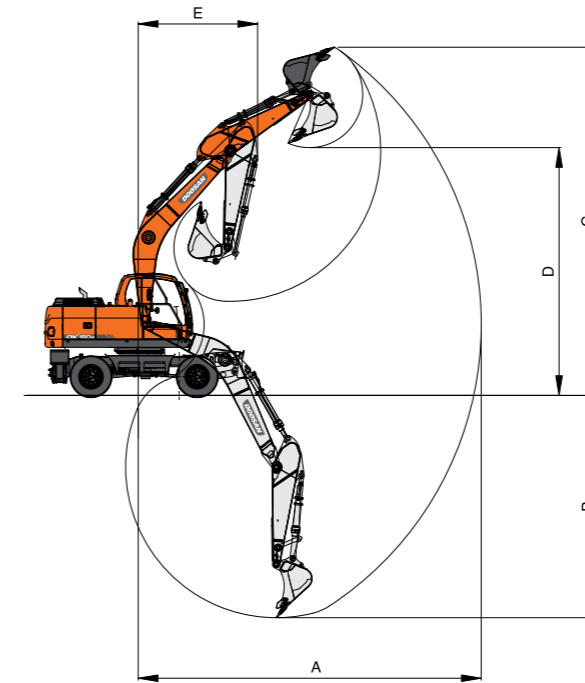


DIMENSIONS

Boom type (Two-piece)	5,360mm(17'7")		
Arm type	2,300mm(7'7")	2,600mm(8'6")	
A Shipping Length	8,860mm(29'1")	8,610mm(28'3")	
B Shipping Width	2,496mm(8'2")		←
C Shipping Height (Boom)	3,140mm(10'4")	3,360mm(11')	
D Height Over Cab.	3,135mm(10'3")		←
E Counter Weight Swing Clearance	2,450mm(8')		←
F Ground Clearance	350mm(1'2")		←
G Counter Weight Clearance	1,249mm(4'1")		←
H Engine Cover Height	2,530mm(8'4")		←
I Upper Housing Width	2,494mm(8'2")		←
J Wheel Base	2,700mm(8'10")		←
K,L Tread Width	1,944mm(6'5")		←

WORKING RANGES

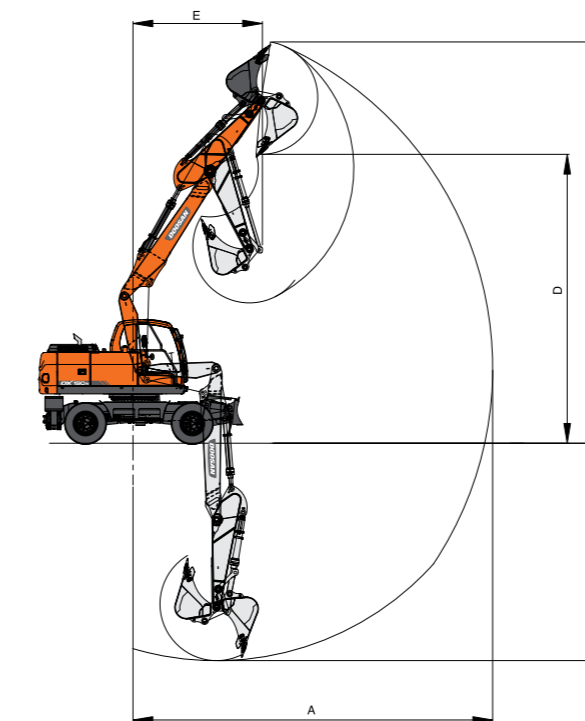
[One-piece Boom]



WORKING RANGES

Boom type (One-piece)	5,200mm(17'1")		
Arm type	2,200mm(7'3")	2,600mm(8'6")	3,100mm(10'2")
A Max. Digging Reach	8,830mm(29')	9,200mm(30'2")	9,560mm(31'4")
B Max. Digging Depth	5,565mm(18'3")	5,965mm(19'7")	6,465mm(21'3")
C Max. Digging Height	9,115mm(29'11")	9,340mm(30'8")	9,270mm(30'5")
D Max. Dump Height	6,420mm(21'1")	6,650mm(21'10")	6,645mm(21'10")
E Min. Swing Radius	3,195mm(10'6")	3,200mm(10'6")	3,185mm(10'5")

[Two-piece Boom]



WORKING RANGES

Boom type (Two-piece)	5,360mm(17'7")	
Arm type	2,300mm(7'7")	2,600mm(8'6")
A Max. Digging Reach	9,235mm(30'3")	9,530mm(31'3")
B Max. Digging Depth	5,600mm(18'4")	5,900mm(19'4")
C Max. Digging Height	10,260mm(33'8")	10,510mm(34'6")
D Max. Dump Height	7,415mm(24'4")	7,660mm(25'2")
E Min. Swing Radius	2,965mm(9'9")	3,160mm(10'4")

DIGGING FORCE (ISO)

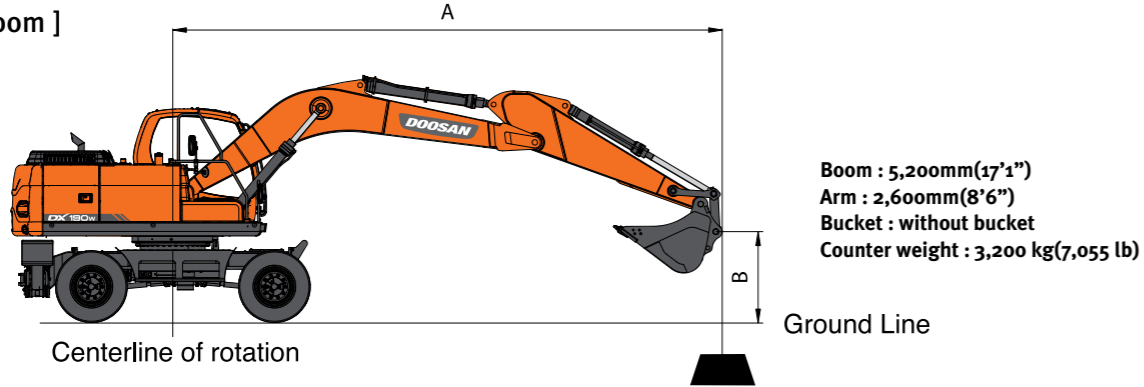
Bucket (PCSA)	0.38m ³	0.45m ³	0.57m ³	0.70m ³	0.76m ³	0.80m ³	0.93m ³
	14,200 kgf	14,200 kgf	14,200 kgf	14,200 kgf	14,200 kgf	14,200 kgf	14,200 kgf
Digging force	139.25 kN	139.25 kN	139.25 kN	139.25 kN	139.25 kN	139.25 kN	139.25 kN
	31,305 lbf	31,305 lbf	31,305 lbf	31,305 lbf	31,305 lbf	31,305 lbf	31,305 lbf

Arm	2,200mm	2,300mm	2,600mm	3,100mm
	10,800 kgf	9,900 kgf	9,300 kgf	8,500 kgf
Digging force	105.91 kN	97.08 kN	91.20 kN	83.36 kN
	23,810 lbf	21,816 lbf	20,503 lbf	18,739 lbf

At power boost (ISO)

LIFTING CAPACITY

[One-piece Boom]



Metric Unit : 1,000kg

A(m)	B(m)	Chassis Frame Attachment	Max. Reach												A(m)	
			2	3	4	5	6	7								
			🔧	🔧	🔧	🔧	🔧	🔧	🔧	🔧	🔧	🔧	🔧	🔧	🔧	🔧
8		R-Rear Dozer Only Up												*3.84	*3.84	4.72
		R-Rear Dozer Only Down												*3.84	*3.84	
		R-Outrigger Only Down												*3.84	*3.84	
		F-Dozer + R-Outrigger Down												*3.84	*3.84	
7		R-Rear Dozer Only Up												*3.51	3.29	5.83
		R-Rear Dozer Only Down												*3.51	*3.51	
		R-Outrigger Only Down												*3.51	*3.51	
		F-Dozer + R-Outrigger Down												*3.51	*3.51	
6		R-Rear Dozer Only Up														6.59
		R-Rear Dozer Only Down								*5.09	3.17			*3.37	2.72	
		R-Outrigger Only Down								*5.09	4.09			*3.37	*3.37	
		F-Dozer + R-Outrigger Down								5.00	*5.09			*3.37	*3.37	
5		R-Rear Dozer Only Up														7.13
		R-Rear Dozer Only Down								*5.84	4.12	5.23	3.14	*4.03	2.47	
		R-Outrigger Only Down								*5.84	*5.84	4.97	*5.57	3.90	*4.03	
		F-Dozer + R-Outrigger Down								*5.84	*5.84	*5.57	*5.57	*4.03	*4.03	
4		R-Rear Dozer Only Up														7.50
		R-Rear Dozer Only Down														
		R-Outrigger Only Down														
		F-Dozer + R-Outrigger Down														
		R-Rear Dozer Only Up														7.71
		R-Rear Dozer Only Down														
		R-Outrigger Only Down														
		F-Dozer + R-Outrigger Down														
2		R-Rear Dozer Only Up														7.79
		R-Rear Dozer Only Down														
		R-Outrigger Only Down														
		F-Dozer + R-Outrigger Down														
1		R-Rear Dozer Only Up														7.74
		R-Rear Dozer Only Down														
		R-Outrigger Only Down														
		F-Dozer + R-Outrigger Down														
0 (Ground)		R-Rear Dozer Only Up														7.55
		R-Rear Dozer Only Down														
		R-Outrigger Only Down														
		F-Dozer + R-Outrigger Down														
		R-Rear Dozer Only Up														7.22
		R-Rear Dozer Only Down														
		R-Outrigger Only Down														
		F-Dozer + R-Outrigger Down														
		R-Rear Dozer Only Up														6.72
		R-Rear Dozer Only Down														
		R-Outrigger Only Down														
		F-Dozer + R-Outrigger Down														
		R-Rear Dozer Only Up														6.00
		R-Rear Dozer Only Down														
		R-Outrigger Only Down														
		F-Dozer + R-Outrigger Down														
		R-Rear Dozer Only Up														4.98
		R-Rear Dozer Only Down														
		R-Outrigger Only Down														
		F-Dozer + R-Outrigger Down														

Feet Unit : 1,000lb

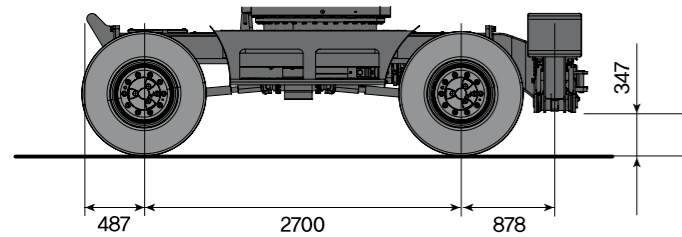
A(ft)	B(ft)	Chassis Frame Attachment	Max. Reach												A(ft)	
			10'	15'	20'	25'										
			🔧	🔧	🔧	🔧	🔧	🔧	🔧	🔧	🔧	🔧	🔧	🔧	🔧	
25		R-Rear Dozer Only Up														17.04
		R-Rear Dozer Only Down														
		R-Outrigger Only Down														
		F-Dozer + R-Outrigger Down														
20		R-Rear Dozer Only Up												*10.62	6.81	21.42
		R-Rear Dozer Only Down												*10.62	8.80	
		R-Outrigger Only Down												*10.62	*10.62	
		F-Dozer + R-Outrigger Down												*10.62	*10.62	
15		R-Rear Dozer Only Up												*14.02	10.23	23.97
		R-Rear Dozer Only Down												*14.02	13.42	
		R-Outrigger Only Down												*14.02	*14.02	
		F-Dozer + R-Outrigger Down												*14.02	*14.02	
10		R-Rear Dozer Only Up														25.28
		R-Rear Dozer Only Down														
		R-Outrigger Only Down														
		F-Dozer + R-Outrigger Down														
5		R-Rear Dozer Only Up														25.53
		R-Rear Dozer Only Down														
		R-Outrigger Only Down														
		F-Dozer + R-Outrigger Down														
0 (Ground)		R-Rear Dozer Only Up														24.77
		R-Rear Dozer Only Down														
		R-Outrigger Only Down														
		F-Dozer + R-Outrigger Down														
-5		R-Rear Dozer Only Up														22.89
		R-Rear Dozer Only Down														
		R-Outrigger Only Down														
		F-Dozer + R-Outrigger Down														
-10		R-Rear Dozer Only Up														19.55
		R-Rear Dozer Only Down														
		R-Outrigger Only Down														
		F-Dozer + R-Outrigger Down														

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.

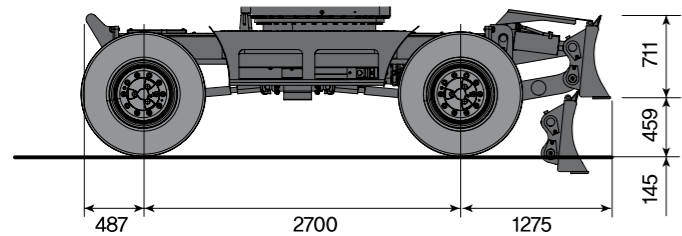
🔧 : Rating Over Front
🔧 : Rating Over Side or 360 degree

UNDERCARRIAGE

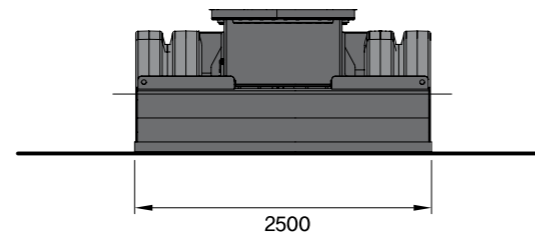
Undercarriage with front cradle and rear outrigger / front cradle and rear dozer



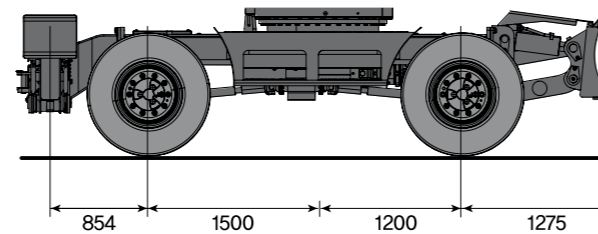
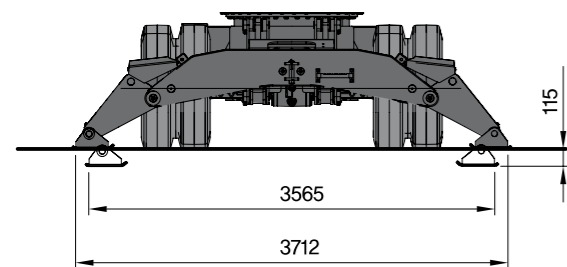
▲ Front Cradle and Rear outrigger



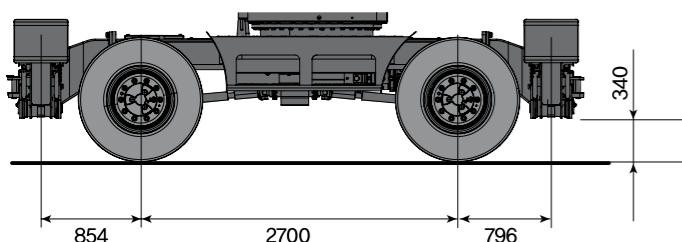
▲ Front Cradle and Rear Dozer



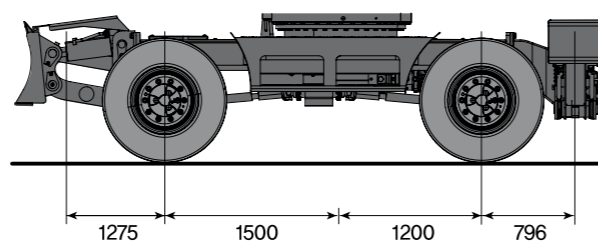
Undercarriage with front outrigger and rear dozer



Undercarriage with front outrigger and rear outrigger / front dozer and rear outrigger



▲ Front Outrigger and Rear Outrigger



▲ Front Dozer and Rear Outrigger

STANDARD AND OPTIONAL EQUIPMENT

STANDARD EQUIPMENT

Hydraulic system

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

Cabin & Interior

- Viscous cab mounts
- Air conditioner
- 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 panel
- Engine speed(RPM) control dial
- AM/FM radio and cassette player
- Remote radio ON/OFF switch
- 12V spare powers socket
- Serial communication port for laptop PC interface
- Joystick lever with 3 switches
- Sunvisor
- Sun roof
- wiper

Safety

- Large handrails and step
- Punched metal anti-slip plates
- Seat belt
- Hydraulic safety lock lever
- Safety glass
- Hammer for emergency escape
- Right and left rearview mirrors
- Reverse travel alarm
- Emergency engine stop
- LED stop lamps

Others

- Double element air cleaner
- Dust screen for radiator/oil cooler/charged air cooler
- Engine overheat prevention system
- Engine restart prevention system
- Self-diagnostic system
- Large capacity alternator(24V, 60 amps)
- Electric horn
- Halogen working lights(frame mounted 2, boom mounted 2)
- Fuel filler pump
- 3.2ton countweight

Undercarriage

- 10.0-20-14PR double tires
- Heavy duty axles
- Parallel dozer blade & individually controlled outriggers
- Tool box
- Front axle oscillation auto lock

OPTIONAL EQUIPMENT

Some of these optional equipments may be standard in some markets. Some of these optional equipments cannot be available on 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.

Safety

- Boom and arm hose rupture protection valve
- Overload warning device
- Cabin Top/Front guard(ISO 10262, FOGS standard)
- Travel & swing alarm
- Rotation beacon
- Mirror & Lamp on counter weight

Cabin & Interior

- Air suspension seat
- MP3/CD player
- Rain shield
- 2 front lamps
- 4 front + 2 rear lamps

Others

- Piping for crusher
- Piping for quick clamp
- Piping for front attachment rotation
- Breaker filter
- Lower wiper
- Fuel heater

Undercarriage

- 10.0-20-16PR double tire / 18.0-19.5-20PR single tire

Doosan is

Since 1896, Doosan, the oldest company in Korea, has evolved with its people. The company grew up rapidly for last 10 years with reputation. For human-oriented vision, Doosan has been building constructions, energy, machines, infra structures globally. As a global leader of infra structure, Doosan continues its vision to make human-oriented future.

First in Korea, Doosan self-developed excavators in 1985 and continued building versatile construction machines including excavators, wheel loaders, articulated dump trucks to execute its human-oriented philosophy. Doosan became a global leader of heavy construction machine industry by achieving global sales line, producing line, and distribution line. Along with large production bases in Korea, China, USA, Belgium, Czech, Brazil, Doosan has 1400 dealer networks and Doosan is providing reliable products and trusted solutions for your stable business at no risk.



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