







# **DX190w** | Wheeled Excavator











# DOOSAN DX19ow hydraulic excavator:



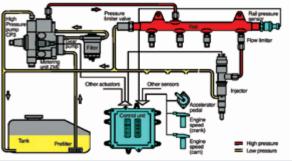


## Performance

The performance of the DX190w has a direct effect on its productivity. Its new "Common Rail" engine and new e-EPOS controlled hydraulic system have combined to create an unbeatable hydraulic excavator, with a cost/performance ratio that makes the DX190w even more appealing.



"Common Rail" Doosan DLo6 Engine



#### **Hydraulic pumps**

The main pumps have a capacity of 2 x 200 l / min reducing cycle time while a high capacity gear pump improves pilot line efficiency.

At the heart of the hydraulic excavator is the new "Common Rail" Doosan DLo6 engine. It is combined with the new e-EPOS electronic control system, for optimum power and fuel saving.

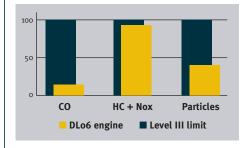
The new engine produces 156 Hp (116 kW/158 Ps) at only 1.900 rpm, and more torque, due to its careful design combined with the use of common rail injection and 4 valves per cylinder. These features help optimize combustion and minimize pollution through reduced Nox & particulate emissions.

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

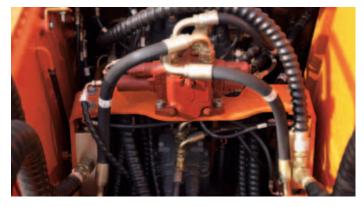
- Faster working cycles increase productivity.
- Increased torque means the excavator is able to move more easily.
- Energy efficiency reduces fuel consumption.

#### DOOSAN Infracore is aware of the importance of protecting the environment.

Ecology was uppermost in the minds of the research workers right from the start of the design of the new machines. The new challenge for the engineers is to combine the protection of nature with equipment performance and to this end DOOSAN has been investing heavily.



The new DOOSAN engine respects and protects the environment, limiting all types of toxic emissions.



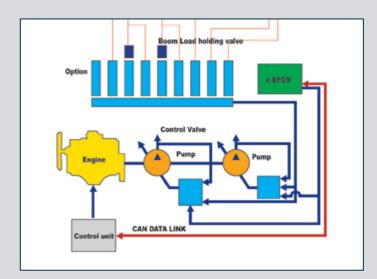
#### Swing drive

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

#### **Excavator control**

#### New e-EPOS system (Electronic Power Optimizing System)

The brains of the hydraulic excavator, the e-EPOS, have been improved and now can electronically link to the engines ECU (Electronic Control Unit), 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 a normal operating mode guarantee maximum efficiency under all conditions.
- Electronic control of fuel consumption optimizes efficiency.
- 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.

#### **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 improved system allows a more correct braking of the machine. 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.



### **New Drive Line Concept**

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



#### **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 bolt-on for maximum flexibility.

An oscillating axle lock is available.



#### **Outriggers**

Outriggers can be mounted on the front and/ or rear for maximum operating stability when digging or lifting (control on option).



#### Dozer Blade

The bolt-on 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 pressure on the ground is reduced to the minimum thanks to the lower design of parallel dozer.

# Handling

The hydraulic excavator's power, durability, ease of servicing and its precise control increase its effectiveness and life expectancy. With the DX19ow, DOOSAN offers an excellent return on investment.



## Warning lights

#### **Operating modes**

- Mode selection
- Flow rate control
- Auto deceleration
- Display selection

## Choice of operating modes

#### Work mode

- Digging mode: for general excavation, loading, lifting...
- Trenching mode: swing priority for trench work, canal digging, embankments...

#### Power mode

- Standard: uses 85% engine power for all work (optimum fuel efficiency)
- Power: uses 100% engine power for heavy work



#### **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.

The control levers have additional electrical buttons for controlling other additional equipment (for example, grabs, crushers, grippers, etc.).

## Control panel

With colour LCD display



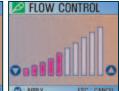
Standard screen Anti-theft function



Filter/oil information



Operation history



Flow rate control

Contrast control

# Comfort

The work rate of the hydraulic excavator is directly linked to the performance of its operator. DOOSAN designed the DX19ow 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.

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.



Control panel

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

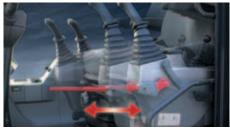








Appropriate storage spaces show the attention given to the operator.



Comfortable fully adjustable seat



Control stand (Telescopic & Tilting Function)

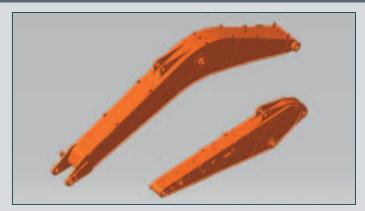


Steering Culumn and cruz control button

# 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.



#### 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.

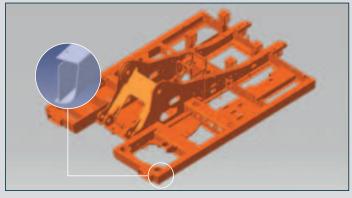
## Arm assembly

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



# Stress Analysis Design (FEM) and innovative manufacturing technique provides a strong and stable undercarriage

The chassis frame, outrigger assembly and dozer blade have been designed by interpretative techniques and reliability testing using 3 dimension CAD tools, to ensure improved durability and reliability.



#### **D-type frame**

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



#### **Bucket**

Highly wear-resistant materials are used for the most susceptible elements such as the blades, teeth, rear and lateral reinforcement plates and corners of the bucket.



#### **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 to bucket pivot, so that greasing is only required every 50 hours.



#### Polymer shim

A polymer shim is added to the bucket, dozer and outrigger pivot to maintain precise control over the equipment.





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



## 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.



**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.

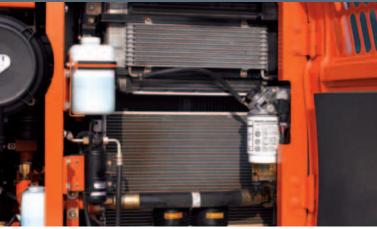
## Maintenance

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.



#### 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.



#### Hydraulic oil return filter

The protection of the hydraulic system is made more effective by the use of glass fibre 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.



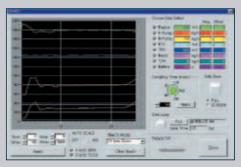
#### Air cleaner

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.



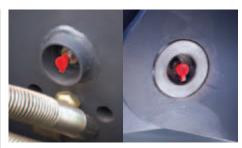
#### **Fuel filter**

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.



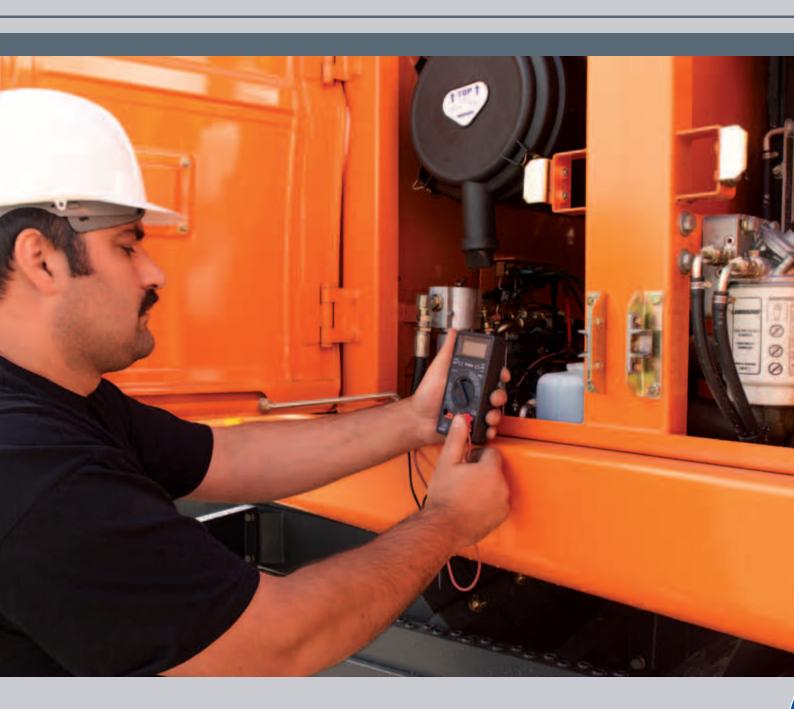
## PC monitoring (DMS)

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 front axle pin grease inlets for easy

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



# Technical specifications



## \* Engine

#### Model

Doosan DLo6

"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 phase III

#### Number of cylinders

6

#### · Nominal flywheel power

116 kW (158 Ps) at 1.900 rpm (DIN 6271, net) 116 kW (155 HP) at 1.900 rpm (SAE J1349, net)

#### Max torque

70 kgf.m (686 Nm) at 1.400 rpm

#### • Piston displacement

5.890 cc

#### • 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.

## \* 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.
- 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 200 l/min

### • Pilot pump

Gear pump – max flow: 26,1 l/min

### Main relief valves

Boom/arm/bucket:

- Normal mode: 330 kg/cm² (324 bar)

- Power mode: 350 kg/cm<sup>2</sup> (343 bar)

Travel: 350 kg/cm² (343 bar) Rotation: 370 kg/cm² (363 bar)

#### \* Weight

Boom (mm)	Arm (mm)	Bucket (m³)	Operating weight (kg)
5.200	2.600	0,80	17.800
5.200	2.600	0,80	18.840
5.360	2.300	0,80	18.260
5.360	2.600	0,76	19.290

## \* 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.

#### • Mono Boom

Cylinders	Quantity	Bore x rod diameter x stroke	
Boom	2	120 x 85 x 1.195 mm	
Arm (short)	1	125 x 90 x 1.470 mm	
Bucket	1	115 x 80 x 1.025 mm	

#### Articulated Boom

Cylinders	Quantity	Bore x rod diameter x stroke	
Boom	2	120 x 85 x 1.030 mm	
Arti. Boom	1	160 x 95 x 760 mm	
Bucket	1	115 x 80 x 1.025 mm	

#### \* Undercarriage

Heavy-duty frame, all-welded stress-relieve structure. Top grade materials used for toughness. Specially heat-treated connecting pins. 10.00-20-16PR (OTR) double tires with tire spacer. Front axle oscillating hydraulically.

### \* Environment

Noise levels comply with environmental regulations (dynamic values).

#### • Sound level guarantee

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

#### • Cab sound level

74,9 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.

## Swing speed: o to 10,9 rpm

#### \* Drive

The wheels are animated by an axial piston engine which involves a transmission Power shift two-speed.

In addition to these two speeds, there is also the position creep speed. A button makes it possible to pass from high to low in work mode.

#### • Travel speed (fast/slow)

Two travel speeds offer either increased torque or high speed tracking. 36/32/10/3 km/h (High/Econo/Low/Creep)

#### • Maximum traction force

10.900 kgf

## \* Refill capacities

• Fuel tank

310 l

• Cooling system (radiator capacity)

24

• Engine oil

25 |

• Swing drive

3,8 l

Final drive

10 l

• Hydraulic tank

116 l

• Front Axle Case

11 l

Rear Axle Case

14,5 l

Transmission

2,5 l

## \* Buckets

Capacity (m³)	Width	(mm)	Weight (Kg)	Recommended (mm)				
SAE	Without With			5.200 5.360		360		
	side cutters	side cutters		2.600	2.300	2.600		
0,38	604	640	441	A	A	А		
0,45	727	775	465	A	A	A		
0,57	865	913	520	A	A	A		
0,70	1.015	1.063	567	A	A	A		
0,76	1.079	1.127	602	A	А	A		
(std) 0,80	1.123	1.171	616	В	A	В		
0,93	1.267	1.315	664	-	В	-		

A. Suitable for materials with a density less than or equal to 2,000 kg/m  $\,$ 

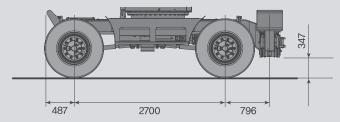
B. Suitable for materials with a density less than or equal to 1,600 kg/m<sup>3</sup>

C. Suitable for materials with a density less than or equal to 1,100  $kg/m^3$ 

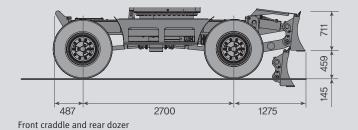
# Undercarriage

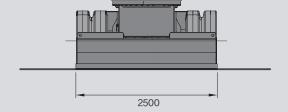


## \* Undercarriage with front craddle and rear outrigger / front craddle and rear dozer

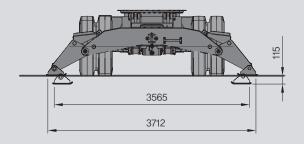


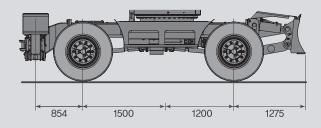
Front craddle and rear outrigger



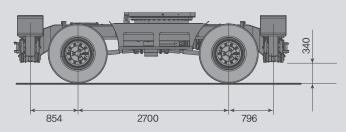


## \* Undercarriage with front outrigger and rear dozer

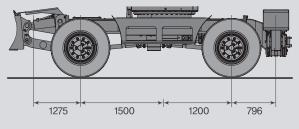




## \* Undercarriage with front outrigger and rear outrigger / front dozer and rear outrigger



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 safety valves
- Swing anti-rebound valves
- Spare ports (valve)
- One touch power boost
- Hydraulic piping for breaker

#### • Cab & interior

- Cab mounted on viscous support
- All weather sound suppressed type cab
- Air conditioning with climat control
- Adjustable suspension seat with adjustable head rest and arm rests
- Sliding front window removable in two parts
- Room light
- Intermittent windshield wiper
- Cigarette lighter and ashtray
- Cup holder
- Hot & cool box
- LCD color monitor
- Fuel control dial
- Loudspeakers and connections for radio
- Remote radio control on console
- 12 V power outlet
- PC interface port for Diagnostics
- Hydraulic control levers with 3 switches
- Sun visor
- Sun roof
- Rainshield

## Safety

- Large handrail and steps
- Punched metal anti-slip plates
- Seatbelt
- Hydraulic safety lock lever
- · Safety glass windows
- Hammer for emergency escape
- Side mirrors
- Reverse travel alarm
- Emergency engine stop (switch)
- · Street lights with LED stop lamps
- · Overload warning device

#### Undercarriage

- Double tires 10-20 16PR
- Rear individually control outriggers
- Tool compartment
- 4 speed (high, econo, low, creep)
- Front axle oscillation auto lock
- Cruise control
- Front parallel dozer blade

## Other

- Two-stage air cleaner with one safety element
- Dust screen for radiators
- Engine overheat prevention system
- Engine restart prevention system
- Self-diagnostic system
- Alternator 24V, 50A
- Horn
- Halogen working lights (chassis mounted 2, boom mounted 2)
- Double fuel filter
- Fuel tank filling pump

## \* 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 application.

### Safety

- Cabin Top/Front guard (ISO 10262, standard FOGS)
- Rotating beacon
- Mirror on counterweight
- Swing alarm

#### • Cab & interior

- Heated air suspension seat
- Radio/CD
- Radio/CD/MP3

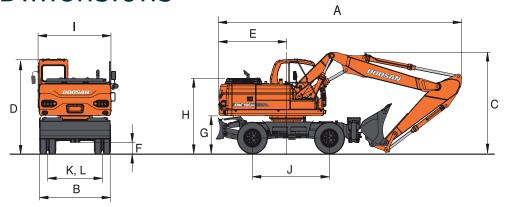
## • Undercarriage

- Front bucket cradle
- Front clamshell cradle
- Front individually controlled outriggers
- Rear parallel dozer blade

### Other

- Hydraulic piping for crusher
- Hydraulic piping for quick coupler
- Hydraulic piping for clamshell
- Hydraulic piping for tilting and rotating
- Additional filter for breaker piping
- Lower cabin windshield wiper
- Fuel heater
- Light Pack (4 front & 2 rear cabin lights, telescopic beacon, 8oAh alternator)
- · Video system with color LCD and o Lux camera
- Upper guard for front glass
- Lower guard for front glass
- Centralize greasing system

# **Dimensions**



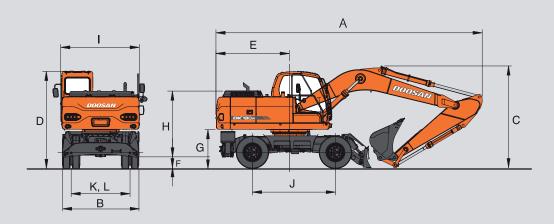


## Articulated Boom - Boom: 5.360 mm - Arm: 2.300/2.600 mm

## \* Dimensions

Вос	om type (two pieces)	5.3	6o mm
Arn	n type	2.300 mm	2.600 mm
A	Shipping length	8.860 mm	8.610 mm
В	Shipping width	2.496 mm	2.496 mm
С	Shipping height (boom)	3.140 mm	3.360 mm
D	Height over cabine	3.135 mm	3.135 mm
E	Counter weight swing clearance	2.450 mm	2.450 mm
F	Ground clearance	350 mm	350 mm
G	Counter weight clearance	1.249 mm	1.249 mm
Н	Engine cover height	2.530 mm	2.530 mm
Ī	Upper housing width	2.494 mm	2.494 mm
J	Wheel base	2.700 mm	2.700 mm
K, L	Tread width	1.944 mm	1.944 mm

## Mono Boom - Boom: 5.200 mm - Arm: 2.200/2.600 mm/3.100 mm

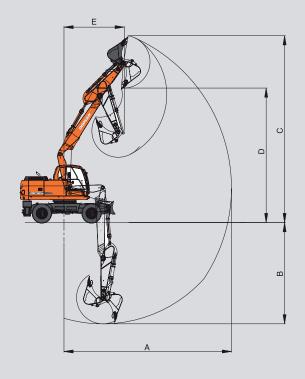


## \* Dimensions

Boo	om type (one piece)		5.200 mm	
Arn	ı type	2.200 mm	2.600 mm	3.100 mm
A	Shipping length	8.715 mm	8.659 mm	8.507 mm
В	Shipping width	2.496 mm	2.496 mm	2.496 mm
С	Shipping height (boom)	3.212 mm	3.310 mm	3.772 mm
D	Height over cabine	3.135 mm	3.135 mm	3.135 mm
E	Counter weight swing clearance	2.450 mm	2.450 mm	2.450 mm
F	Ground clearance	350 mm	350 mm	350 mm
G	Counter weight clearance	1.249 mm	1.249 mm	1.249 mm
Н	Engine cover height	2.530 mm	2.530 mm	2.530 mm
Ī	Upper housing width	2.494 mm	2.494 mm	2.494 mm
J	Wheel base	2.700 mm	2.700 mm	2.700 mm
K, L	Tread width	1.944 mm	1.944 mm	1.944 mm

# Working ranges

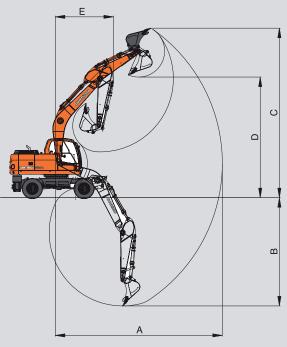
## Articulated Boom - Boom: 5.360 mm, front cradle and rear dozer / front dozer and rear outrigger



## \* Working range

Boo	om type (two pieces)		5.360 mm					
Arn	n type		2.300 mm	2.600 mm				
A.	Max. digging radius	mm	9.235	9.530				
В.	Max. digging depth	mm	5.600	5.900				
C.	Max. digging height	mm	10.260	10.510				
D.	Max. dumping height	mm	7.415	7.660				
E.	Min. digging radius	mm	2.965	3.160				

## Mono Boom - Boom: 5.200, front craddle and rear dozer / front dozer and rear outrigger



## \* Working range

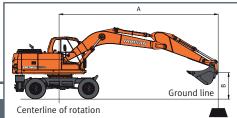
Boo	m type (one piece)		5.200 mm							
Arm	type		2.200 mm	2.600 mm	3.100 mm					
A.	Max. digging radius	mm	8.830	9.200	9.560					
В.	Max. digging depth	mm	5.565	5.965	6.465					
C.	Max. digging height	mm	9.115	9.340	9.270					
D.	Max. dumping height	mm	6.420	6.650	6.645					
E.	Min. digging radius	mm	3.195	3.200	3.185					

## \* Digging forces (ISO)

Bucket (PCSA) (HD)	<b>0,70</b> m <sup>3</sup>				
Digging force*	11.700 kgf				
	114,7 kN				
Arm	2.200 mm	2.300 mm	2.600 mm	3.100 mm	
Digging force*	9.800 kgf	9.000 kgf	8.400 kgf	7.800 kgf	
	96,1 kN	88,3 kN	82,4 kN	76,5 kN	

# Lifting capacity





## **Standard configuration – Mono Boom**

Front craddle and rear dozer down — Boom: 5.200 mm - Arm: 2.200 mm - Without bucket - Counter weight: 3.200 kg

Units: 1.000 kg

A (m)	2		3		4		Į.	5	(	6		7	Max. Reach		1
B (m)	ů	<u>[4</u> 9	<b>6</b>	( <del>]</del> 0	<sup>1</sup>	<u>(=</u> 6	P P	( <del>]</del> e	<u> </u>	<u>(4</u> e	<sup>1</sup>	<u>-</u> 9	6	( <del>- </del> -0	A(m)
8															
7							*6,00	5,39					*5,02	4,88	5,31
6							*5,91	5,39	5,11	4,05			*4,77	3,90	6,14
5							*6,30	5,32	5,09	4,04			4,27	3,39	6,72
4					*8,23	7,28	6,64	5,20	5,03	3,98	3,99	3,16	3,90	3,09	7,10
3					9,20	7,00	6,50	5,06	4,96	3,90	3,96	3,13	3,69	2,92	7,33
2					8,95	6,77	6,36	4,93	4,88	3,83	3,91	3,09	3,61	2,85	7,42
1					8,81	6,64	6,26	4,84	4,81	3,77	3,88	3,06	3,62	2,86	7,36
o (ground)					8,76	6,59	6,20	4,79	4,77	3,73	3,86	3,04	3,75	2,95	7,16
-1			*8,80	*8,80	8,76	6,59	6,18	4,77	4,76	3,72			4,02	3,16	6,81
-2	*9,45	*9,45	*12,76	10,65	8,80	6,63	6,21	4,79	4,79	3,75			4,52	3,55	6,27
-3	*13,23	*13,23	*10,85	10,77	*8,84	6,72	6,28	4,86					5,49	4,29	5,50
-4			*7,78	*7,78	*6,14	*6,14							*5,33	*5,33	4,36

Front craddle and rear dozer down - Boom: 5.200 mm - Arm: 2.600 mm - Without bucket - Counter weight: 3.200 kg

Units: 1.000 kg

A (m)	A (m) 2		3			4		5	(	5	7	7		Max. Reach	1
B (m)	e e	<del>(</del>	<b>4</b>	<del>(</del>	<del>U</del>	<b>(</b>	- E	<del>(</del>	<u> </u>	<b>(</b>	<sup>1</sup>	<del>(</del>	<u> </u>	<del>(</del>	A(m)
8													*3,84	*3,84	4,72
7													*3,51	*3,51	5,83
6									*5,09	4,09			*3,37	*3,37	6,59
5							*5,84	5,36	5,12	4,06	*4,03	3,20	*3,33	3,10	7,13
4			*9,56	*9,56	*7,57	7,37	*6,54	5,24	5,06	4,00	4,01	3,18	*3,36	2,86	7,50
3					*9,11	7,09	6,54	5,10	4,97	3,92	3,96	3,14	3,43	2,72	7,71
2					9,04	6,85	6,39	4,96	4,89	3,84	3,92	3,09	3,35	2,65	7,79
1					8,86	6,68	6,28	4,86	4,82	3,77	3,87	3,05	3,37	2,66	7,74
o (ground)			*5,74	*5,74	8,77	6,60	6,20	4,79	4,77	3,72	3,85	3,02	3,47	2,73	7,55
-1	*5,29	*5,29	*8,62	*8,62	8,74	6,58	6,17	4,76	4,74	3,70	3,84	3,02	3,69	2,90	7,22
-2	*8,48	*8,48	*12,39	10,59	8,77	6,60	6,18	4,76	4,75	3,71			4,08	3,21	6,72
-3	*12,31	*12,31	*11,96	10,69	8,83	6,66	6,23	4,81	4,81	3,77			4,81	3,77	6,00
-4			*9,33	*9,33	*7,46	6,78							*5,50	4,96	4,98

Front dozer and rear outrigger down - Boom: 5.200 mm - Arm: 2.600 mm - Without bucket - Counterweight: 3.200 kg

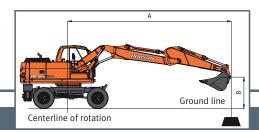
Units: 1.000 kg

A (m)	:	2		3		4	Į.	5	(	5		7	Max. Reach		1
B (m)	<sup>®</sup>	<u>G</u>	<u> </u>	( <del> </del>	<u>6</u>	( <del>]</del>	<sup>10</sup>	( <del>c</del>	<u>F</u>	( <del>]</del> e	<sup>1</sup>	<u>G</u>	<b>6</b>	( <del>d</del> e	A(m)
8													*3,84	*3,84	4,72
7													*3,51	*3,51	5,83
6									*5,09	*5,09			*3,37	*3,37	6,59
5							*5,84	*5,84	*5,57	*5,57	*4,03	*4,03	*3,33	*3,33	7,13
4			*9,56	*9,56	*7,57	*7,57	*6,54	*6,54	*5,94	5,79	*5,45	4,56	*3,36	*3,36	7,50
3					*9,11	*9,11	*7,39	*7,39	*6,42	5,70	*5,83	4,51	*3,44	*3,44	7,71
2					*10,50	*10,50	*8,20	7,43	*6,90	5,61	*6,09	4,46	*3,59	*3,59	7,79
1					*11,35	10,56	*8,81	7,30	*7,29	5,54	*6,30	4,42	*3,80	*3,80	7,74
o (ground)			*5,74	*5,74	*11,61	10,47	*9,11	7,23	*7,50	5,48	*6,36	4,39	*4,12	3,95	7,55
-1	*5,29	*5,29	*8,62	*8,62	*11,40	10,44	*9,07	7,19	*7,45	5,46	*6,17	4,38	*4,60	4,21	7,22
-2	*8,48	*8,48	*12,39	*12,39	*10,74	10,46	*8,63	7,20	*7,03	5,47			*5,36	4,67	6,72
-3	*12,31	*12,31	*11,96	*11,96	*9,54	*9,54	*7,66	7,25	*5,85	5,53			*5,85	5,53	6,00
-4			*9,33	*9,33	*7,46	*7,46							*5,50	*5,50	4,98

Front craddle and rear dozer down — Boom: 5.200 mm - Arm: 3.100 mm - Without bucket - Counter weight: 3.200 kg

Units: 1.000 kg

A (m)	:	2		3		4		5		6		7		8		Max. Reach		
B (m)	4	( <del>]</del>	6	( <del>]</del>	6	( <del>]</del>	ě	<del>(</del>	<u> </u>	<del>(</del>	<u>-</u>	<del>(</del>	<u>-</u>	CH2	<u>-</u>	<del>G</del>	A(m)	
8															*3,44	*3,44	5,30	
7									*3,91	*3,91					*3,24	*3,24	6,30	
6									*4,70	4,11	*3,19	*3,19			*3,16	*3,16	7,01	
5									*5,05	4,06	4,03	3,20			*3,15	2,85	7,52	
4							*5,92	5,26	5,05	3,99	3,99	3,16			*3,20	2,63	7,87	
3			*11,07	*11,07	*8,20	7,14	6,54	5,10	4,95	3,90	3,93	3,10	3,22	2,54	3,17	2,50	8,07	
2			*7,95	*7,95	9,05	6,85	6,37	4,94	4,85	3,80	3,87	3,05	3,19	2,51	3,10	2,44	8,15	
1			*5,99	*5,99	8,81	6,63	6,23	4,80	4,76	3,72	3,82	2,99	3,16	2,48	3,10	2,44	8,10	
o (ground)			*6,94	*6,94	8,67	6,50	6,13	4,71	4,70	3,65	3,78	2,95			3,18	2,50	7,92	
-1	*5,59	*5,59	*8,94	*8,94	8,61	6,45	6,07	4,66	4,66	3,62	3,76	2,93			3,36	2,63	7,60	
-2	*8,07	*8,07	*11,79	10,35	8,61	6,45	6,06	4,65	4,65	3,61	3,76	2,94			3,68	2,88	7,13	
-3	*11,05	*11,05	*12,98	10,44	8,66	6,50	6,09	4,68	4,68	3,64					4,24	3,31	6,46	
-4	*14,29	*14,29	*10,82	10,60	*8,54	6,59	6,18	4,76							5,35	4,15	5,53	
-5					*5,59	*5,59									*5,29	*5,29	4,15	



## Standard configuration – Articulated Boom

## Front dozer and rear outrigger down - Boom: 5.200 mm - Arm: 3.100 mm - Without bucket - Counter weight: 3.200 kg

#### Units: 1.000 kg

A (m)		2	:	3		4		5		6		7		8		Max. Reach	
	<u> </u>	<del>G</del> s	<b>B</b>	( <del>]</del> a	<del>U</del>	<del>(</del>	<b>6</b>	<b>(</b>	6	<b>(</b>	•	<del>(</del>	e e	<del>G</del>	- F	<del>(</del>	A(m)
8															*3,44	*3,44	5,30
7									*3,91	*3,91					*3,24	*3,24	6,30
6									*4,70	*4,70	*3,19	*3,19			*3,16	*3,16	7,01
5									*5,05	*5,05	*4,44	*4,44			*3,15	*3,15	7,52
4							*5,92	*5,92	*5,46	*5,46	*5,18	4,54			*3,20	*3,20	7,87
3			*11,07	*11,07	*8,20	*8,20	*6,80	*6,80	*5,99	5,69	*5,47	4,49	*3,64	*3,64	*3,31	*3,31	8,07
2			*7,95	*7,95	*9,73	*9,73	*7,69	7,41	*6,53	5,58	*5,79	4,42	*4,19	3,63	*3,47	*3,47	8,15
1			*5,99	*5,99	*10,84	10,52	*8,42	7,26	*7,00	5,49	*6,07	4,37	*4,27	3,60	*3,70	3,53	8,10
o (ground)			*6,94	*6,94	*11,39	10,37	*8,88	7,15	*7,31	5,41	*6,24	4,32			*4,04	3,63	7,92
-1	*5,59	*5,59	*8,94	*8,94	*11,43	10,30	*9,01	7,09	*7,40	5,37	*6,23	4,30			*4,53	3,84	7,60
-2	*8,07	*8,07	*11,79	*11,79	*11,02	10,30	*8,78	7,08	*7,19	5,37	*5,89	4,31			*5,30	4,21	7,13
-3	*11,05	*11,05	*12,98	*12,98	*10,12	*10,12	*8,11	7,11	*6,53	5,40					*5,80	4,87	6,46
-4	*14,29	*14,29	*10,82	*10,82	*8,54	*8,54	*6,73	*6,73							*5,76	*5,76	5,53
-5					*5,59	*5,59									*5,29	*5,29	4,15

## Front outrigger and rear dozer down - Boom: 5.360 mm - Arm: 2.300 mm - Without bucket - Counter weight: 3.200 kg

## Units: 1.000 kg

A (m)		3	4		5		6			7	Max. Reach			
B (m)	<del>-</del>	<del>(</del>	-	<del>(</del>	<u> </u>	<del>(</del>	e e	( <del> </del>	<u> </u>	<del>(</del>	e e	<del>(</del>	A(m)	
8											*3,49	*3,49	4,74	
7					*4,58	*4,58					*3,08	*3,08	5,84	
6					*4,63	*4,63	*4,77	*4,77			*2,89	*2,89	6,60	
5			*5,47	*5,47	*5,10	*5,10	*4,93	*4,93	*4,26	*4,26	*2,79	*2,79	7,14	
4			*6,86	*6,86	*5,86	*5,86	*5,34	*5,34	*5,13	4,54	*2,76	*2,76	7,51	
3			*8,55	*8,55	*6,78	*6,78	*5,88	5,67	*5,41	4,50	*2,77	*2,77	7,72	
2			*10,08	*10,08	*7,68	7,39	*6,44	5,59	*5,75	4,46	*2,82	*2,82	7,80	
1			*9,51	*9,51	*8,42	7,28	*6,95	5,53	*6,06	4,42	*2,92	*2,92	7,75	
o (ground)			*11,13	10,47	*8,90	7,22	*7,32	5,48	*6,29	4,40	*3,08	*3,08	7,56	
-1	*7,07	*7,07	*11,57	10,47	*9,11	7,21	*7,49	5,47	*6,33	4,40	*3,32	*3,32	7,23	
-2	*11,45	*11,45	*11,29	10,51	*9,00	7,23	*7,37	5,49			*3,70	*3,70	6,73	

## Front outrigger and rear dozer down — Boom: 5.360 mm - Arm: 2.600 mm - Without bucket - Counter weight: 3.200 kg

#### Units: 1.000 kg

A (m)	;	3		4		5		6		7		8		Max. Reach		
B (m)	ď	( <del>]</del>	<del>u</del>	C#s	ů	<b>G</b>	4	( <del>]</del>	ď	( <del>d</del> a	6	( <del>]</del>	<u>&amp;</u>	( <del>]</del> =	A(m)	
9													*4,03	*4,03	3,67	
8					*4,47	*4,47							*3,22	*3,22	5,22	
7					*4,18	*4,18	*4,31	*4,31					*2,89	*2,89	6,23	
6					*4,29	*4,29	*4,45	*4,45					*2,72	*2,72	6,95	
5			*5,00	*5,00	*4,78	*4,78	*4,67	*4,67	*4,72	4,61			*2,63	*2,63	7,47	
4			*6,36	*6,36	*5,54	*5,54	*5,11	*5,11	*4,91	4,58			*2,60	*2,60	7,81	
3			*8,04	*8,04	*6,48	*6,48	*5,67	*5,67	*5,23	4,53	*2,91	*2,91	*2,61	*2,61	8,02	
2			*9,64	*9,64	*7,43	*7,43	*6,26	5,62	*5,60	4,48	*3,82	3,68	*2,66	*2,66	8,10	
1			*10,68	10,57	*8,23	7,32	*6,81	5,55	*5,95	4,43	*3,44	*3,44	*2,75	*2,75	8,05	
o (ground)			*11,29	10,49	*8,79	7,24	*7,23	5,50	*6,23	4,40			*2,89	*2,89	7,87	
-1	*6,81	*6,81	*11,60	10,47	*9,08	7,21	*7,47	5,48	*6,36	4,40			*3,10	*3,10	7,55	
-2	*10,44	*10,44	*11,44	10,50	*9,08	7,22	*7,46	5,79	*4,71	4,43			*3,42	*3,42	7,07	
-3			*10,86	10,58	*8,67	7,27	*6,98	5,54					*6,82	5,42	6,10	

🖁 : Rating over front

😭: Rating over side or 360 degree

<sup>1.</sup> Ratings are based on SAE J1097

<sup>2.</sup> The load point is a hook located on the back of the bucket.

<sup>3. \*</sup> Rated loads are based on hydraulic capacity.
4. Rated loads do not exceed 87% of hydraulic capacity or 75% of tipping capacity.



