

# Technical specifications

## Engine

Designed to deliver superior performance and fuel efficiency, the Doosan Stage IV diesel engine fully meets the latest emissions regulations. To optimise machine performance, the engine uses high-pressure fuel injectors, air-to-air inter-cooler and electronic engine controls. 4-Cycle Water-Cooled, Wastegate Turbocharged, Exhaust Gas Recirculation (EGR) & Selective Catalytic Reduction (SCR) with no Diesel Particulate Filter (DPF).

	DX255LC-5
Model	Doosan DLo6
No. of cylinders	6
Rated power at 1900 rpm	
(SAE J1995)	129.4 kW (173.5 hp)
(SAE J1349)	123.2 kW (165.2 hp)
(ISO 9249)	123.2 kW (165.2 hp)
Max. torque at 1400 rpm	82 kgf.m (804 Nm)
Idle (low - high)	800 [±20] - 2000 [+25/-50] rpm
Piston displacement	5890 cm³
Bore × stroke	100 mm × 125 mm
Starter	24 V × 6 kW
Batteries - Alternator	2 × 12 V, 150 Ah - 24 V, 80 A
Air filter	Double element air cleaner and pre-filtered Turbo dust separator

## Undercarriage

Extremely robust construction throughout - made of high-quality, durable materials, with all welded structures designed to limit stresses.

- Track rollers lubricated for life
- Idlers and sprockets fitted with floating seals
- Track shoes made of induction-hardened alloy with triple grouser
- Heat-treated connecting pins
- Hydraulic track adjuster with shock-absorbing tension mechanism

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

	DX255LC-5
Upper rollers (standard shoe)	2
Lower rollers	10
Number of links & shoes per side	51
Link pitch	190 mm
Overall track length	4630 mm

## Weight

	Shoe width (mm)	Operating weight (t)	Ground pressure (kgf/cm²)
Triple grouser	600 (Std)	25.4	0.52
	700	25.9	0.45
	800	26.2	0.40
	900	26.5	0.36

## Component weights

Item	Unit	Weight	Remarks
Upper structure without front	kg	11749	With counterweight
Lower structure assembly	kg	8904	
Front assembly	kg	4886	
Counterweight	kg	5000	
Boom	mm kg	5900 / 6090 two-piece 1680 / 2130	Including bushing
Arm	mm kg	2500 / 3000 / 3500 708 / 820 / 921	Including bushing

## Hydraulic system

The e-EPOS (Electronic Power Optimising System) is the brain of the excavator - minimising fuel consumption and enabling the efficiency of the hydraulic system to be optimised for all working conditions.

To harmonise the operation of the engine and the hydraulics, the e-EPOS is connected to the engine's electronic control unit (ECU) via a data transfer link.

- The hydraulic system enables independent or combined operations
- 2 travel speeds offer either increased torque or high speed
- Cross-sensing pump system for fuel savings
- Auto-deceleration system
- 4 operating modes, 4 power modes
- Flow and pressure control of auxiliary hydraulic circuits from control panel
- Computer-aided pump flow control

### ► Pumps & system pressure

	DX255LC-5
Main pumps, type:	2 × variable displacement tandem axial piston pumps
Maximum flow at 1900 rpm	2 × 219 l/min
Pilot pump, type:	Gear pump
Maximum flow at 1900 rpm	28.5 l/min
Relief valve settings:	
Implement	350 kg/cm²
Travel	350 kg/cm²
Swing	275 kg/cm²
Pilot	40 kg/cm²

## Hydraulic cylinders

High-strength steel piston rods and cylinder bodies. Shock-absorbing mechanism fitted in all cylinders for shock-free operation and extended piston life.

Cylinders	Quantity	Bore × rod diameter × stroke (mm)
One-piece boom	2	130 × 90 × 1365
Arm	1	140 × 100 × 1655
Bucket	1	125 × 85 × 1080
Two-piece boom, lower	2	130 × 90 × 1335
Two-piece boom, upper	1	160 × 100 × 1300
Arm, two-piece boom	1	140 × 100 × 1655

## ➤ Swing mechanism

The swing mechanism uses an axial piston motor, driving a 2-stage planetary reduction gear bathed in oil for maximum torque.

- Swing bearing: single-row, shear type ball bearing with induction hardened internal gear
- Internal gear and pinion immersed in lubricant

### ► Swing speed & torque

	DX255LC-5
Maximum swing speed	9.53 rpm
Maximum swing torque	9880 kgf/m

## ➤ Drive

Each track is driven by an independent, high-torque axial piston motor through a planetary reduction gearbox. Two levers / foot pedals guarantee smooth travel with counter-rotation on demand.

The track frame protects the travel motor, brake and planetary gears. The multi-disc track brakes are spring-applied and hydraulic released.

### ► Speed & traction

	DX255LC-5
Travel speed (low - high)	3.1 - 5.3 km/h
Maximum traction	28.5 t
Maximum gradeability	35° / 70%

## ➤ Fluid capacities

	DX255LC-5
Fuel tank	420 l
Cooling system (radiator)	28 l
Hydraulic oil tank	240 l
Engine oil	27 l
Swing drive	7.0 l
Travel device	2 × 3.0 l

## ➤ Cab

The air-conditioning and heating systems are integrated for optimal climate control. An automatically-controlled fan supplies the pressurised and filtered cab air, which is distributed throughout the cab from multiple vents.

The heated air suspension, adjustable operator's seat includes a seat belt. The operator can adjust the ergonomic seat and joystick console separately according to his preferences.

### ► Noise emission

	DX255LC-5
A-weighted emission sound pressure level at the operator's position, LpAd (ISO 6396:2008)	Declared : 70 dB(A) Measured : 69 dB(A)
A-weighted sound power level, LwAd (2000/14/EC)	Declared : 103 dB(A) Measured : 101 dB(A)

Note – Declared single-number noise emission values are the sum of measured values and the associated uncertainty, and they represent upper boundaries of the range of values which is likely to occur in measurements.

## ➤ Buckets

					Standard track / narrow track					
Bucket Type	Capacity (m³) SAE	Width (mm)		Weight (kg)	One-piece boom			Two-piece boom		
		With side cutters	W/O side cutters		Arm 2.5 m	Arm 3.0 m	Arm 3.5 m	Arm 2.5 m	Arm 3.0 m	Arm 3.5 m
GP	0.51	772	722	529	A / A	A / A	A / A	A / A	A / A	A / A
	0.81	1128	1064	654	A / A	A / A	A / A	A / A	A / A	A / A
	0.92	1236	1173	697	A / A	A / A	A / A	A / A	A / A	A / A
	1.05	1372	1309	751	A / A	A / A	A / A	A / A	A / A	A / A
	1.10	1377	1316	836	A / A	A / A	A / A	A / A	A / A	A / B
	1.17	1493	1430	809	A / A	A / A	A / B	A / A	A / B	A / B
	1.28	1607	1544	976	A / A	A / B	B / C	A / B	B / C	B / C
HD	1.40	1668	1607	848	A / A	A / B	B / C	A / B	B / C	C / C
	0.73	982	916	732	A / A	A / A	A / A	A / A	A / A	A / A
	0.90	1130	1064	804	A / A	A / A	A / A	A / A	A / A	A / A
	1.07	1286	1220	864	A / A	A / A	A / A	A / A	A / A	A / B
	1.24	1438	1372	923	A / A	A / B	B / B	A / A	A / B	B / C
	1.32	1516	1450	967	A / A	A / B	B / C	A / B	B / C	C / C
	1.49	1666	1600	1039	A / B	B / C	C / D	B / C	C / D	C / D

A: Suitable for materials with a density less than or equal to 2100 kg/m³

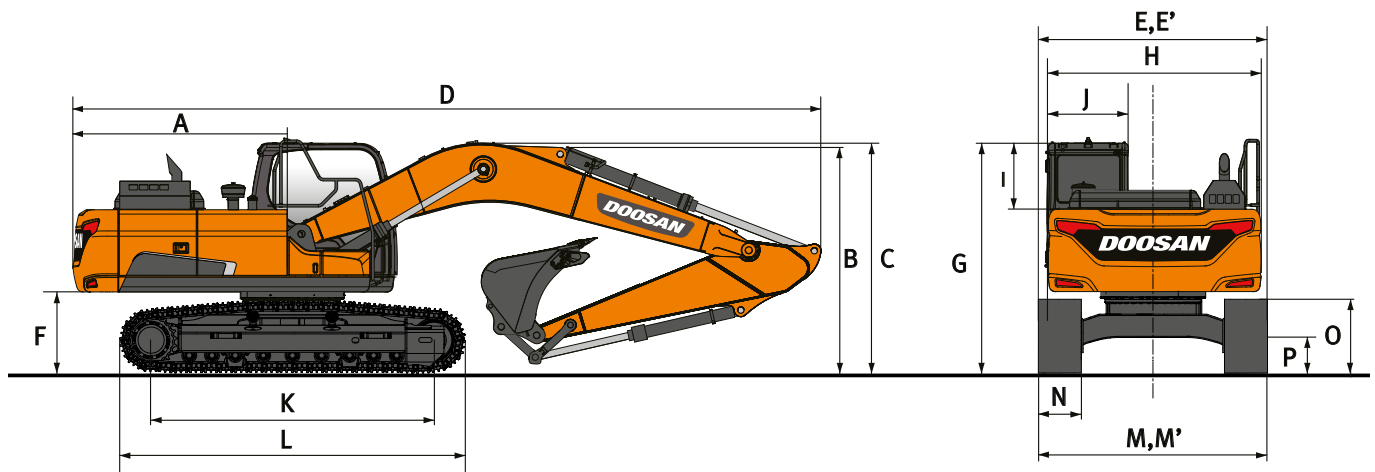
B: Suitable for materials with a density less than or equal to 1800 kg/m³

C: Suitable for materials with a density less than or equal to 1500 kg/m³

D: Suitable for materials with a density less than or equal to 1200 kg/m³

Based on ISO 10567 and SAE J296, arm length without quick-coupler. For reference only.

# Dimensions



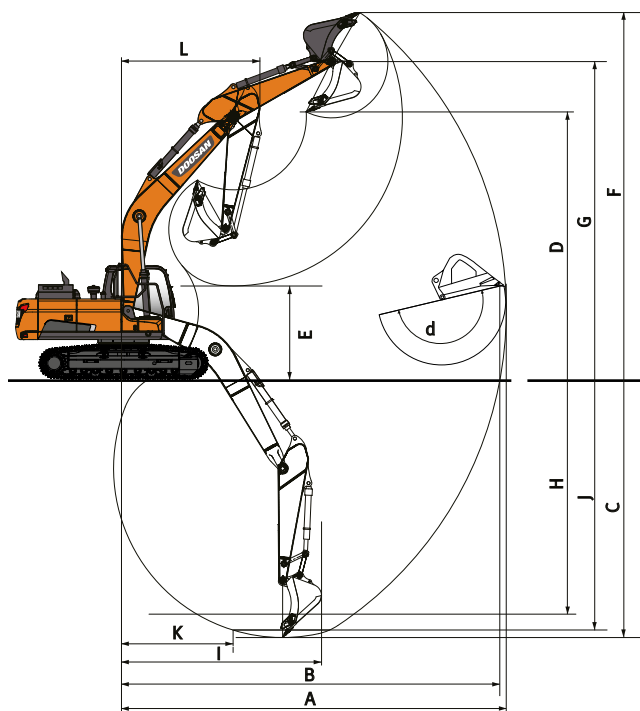
## Dimensions

	One-piece boom			Two-piece boom		
	5900			6090 (3050 LB + 3050 UB)		
Boom length - mm	2500	3000	3500	2500	3000	3500
Arm length - mm	2500	3000	3500	2500	3000	3500
Bucket capacity - m <sup>3</sup>	1.17	1.10	0.92	1.17	1.10	0.92
A Tail swing radius - mm	3040	3040	3040	3040	3040	3040
B Shipping height (boom) - mm	3085	2995	3380	3095	3115	3460
C Shipping height (hose) - mm	3300	3200	3555	3095	3115	3500
D Shipping length - mm	10145	10080	10105	10285	10260	10190
E Shipping width std. - mm	3200	3200	3200	3200	3200	3200
E' Shipping width narrow - mm	3000	3000	3000	3000	3000	3000
F Counterweight clearance - mm	1110	1110	1110	1110	1110	1110
G Height over cab - mm	2995	2995	2995	2995	2995	2995
H House width - mm	2710	2710	2710	2710	2710	2710
I Cab height above house - mm	840	840	840	840	840	840
J Cab width - mm	1010	1010	1010	1010	1010	1010
K Tumbler distance - mm	3835	3835	3835	3835	3835	3835
L Track length - mm	4630	4630	4630	4630	4630	4630
M Undercarriage width std - mm	3200	3200	3200	3200	3200	3200
M' Undercarriage width narrow - mm	3000	3000	3000	3000	3000	3000
N Shoe width std. - mm	600	600	600	600	600	600
N' Shoe width narrow. - mm	600	600	600	600	600	600
O Track height - mm	990	990	990	990	990	990
P Ground clearance - mm	450	450	450	450	450	450

## Digging forces (ISO)

	One-piece boom			Two-piece boom		
	5900			6090 (3050 LB + 3050 UB)		
Boom length - mm	2500	3000	3500	2500	3000	3500
Arm length - mm	2500	3000	3500	2500	3000	3500
Bucket capacity - m <sup>3</sup>	1.17	1.10	0.92	1.17	1.10	0.92
BUCKET (Normal/Press. Up) - ton	17.0 / 17.9	17.0 / 17.9	17.0 / 17.9	17.0 / 17.9	17.0 / 17.9	17.0 / 17.9
ARM (Normal/Press. Up) - ton	14.6 / 15.4	12.1 / 12.8	11.1 / 11.7	14.6 / 15.4	12.1 / 12.8	11.1 / 11.7

# Working range



## Working range

	One-piece boom			Two-piece boom		
	5900			6090 (3050 LB + 3050 UB)		
Boom length - mm	2500	3000	3500	2500	3000	3500
Arm length - mm	2500	3000	3500	2500	3000	3500
Bucket capacity - m³	1.17	1.10	0.92	1.17	1.10	0.92
A Max. digging reach - mm	9650	10175	10605	9950	10485	10935
B Max. digging reach (ground) - mm	9455	9995	10430	9765	10310	10765
C Max. digging depth - mm	6310	6810	7315	6205	6735	7210
D Max. loading height - mm	6650	7025	7170	8155	8645	8960
E Min. loading height - mm	3100	2600	2090	4100	3500	3090
F Max. digging height - mm	9275	9705	9820	11030	11545	11850
G Max. bucket pin height - mm	8120	8500	8640	9625	10115	10430
H Max. vertical wall depth - mm	4450	5200	5520	4655	4680	5645
I Max. radius vertical - mm	7215	7225	7520	7235	7765	7560
J Max. digging depth (8° level) - mm	6060	6615	7135	6090	6630	7100
K Min. radius 8° line - mm	2845	2930	2945	1675	1675	1735
L Min. swing radius - mm	3730	3720	3745	3080	2935	3285
d Bucket angle - °	174	174	174	174	174	174

## Doosan Buckets

4 More. More choice - More durable - More strength - More performance!

### General Construction Bucket



The 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 Construction Bucket



The Heavy duty bucket is designed for mass excavations in dense materials such as hard packed clay, shot limestone, limited rock content and gravel.

### Severe Mining Bucket



The Severe duty bucket is designed for durability in digging compact materials like loose or blasted rock, hard packed clay and stone.

### X-treme Mining Bucket



The X-treme duty bucket is designed as a long-life version of the Severe duty bucket for digging in the most abrasive materials.

# Lifting capacities

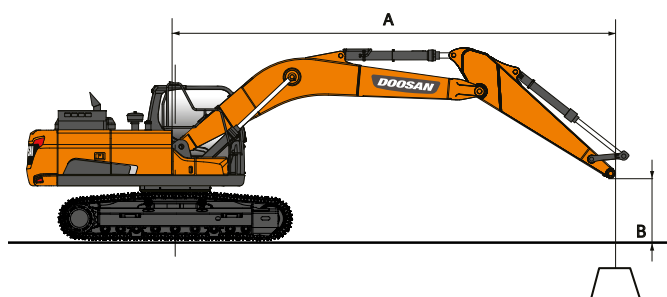
## DX255LC-5

Standard track width: 3200 mm • W/O Bucket

Unit: 1000 kg	A	1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		Max. reach		
	B													A
One-piece boom 5.9 m Arm 3.0 m Shoe 600 mm Counterweight 5.0 t	7.5 m							6.38 *	6.38 *			4.89 *	4.89 *	6.64
	6.0 m							6.51 *	6.51 *	5.43 *	4.79	4.62 *	4.6	7.67
	4.5 m							7.26 *	6.69	6.63 *	4.71	4.59 *	3.97	8.31
	3.0 m					10.85 *	9.76	8.34 *	6.36	6.81	4.56	4.73 *	3.66	8.64
	1.5 m					12.84 *	9.12	9.32	6.05	6.64	4.4	5.05 *	3.55	8.70
	0.0 m			6.82 *	6.82 *	13.75 *	8.79	9.08	5.84	6.51	4.29	5.45	3.62	8.49
	-1.5 m	7.82 *	7.82 *	11.85 *	11.85 *	13.64 *	8.71	8.98	5.75	6.47	4.25	5.92	3.91	8.00
	-3.0 m	12.99 *	12.99 *	17.47 *	17.47 *	12.57 *	8.8	9.03	5.79			6.98	4.59	7.17
	-4.5 m			13.74 *	13.74 *	10.13 *	9.06					7.35 *	6.27	5.83
One-piece boom 5.9 m Arm 3.0 m Shoe 800 mm Counterweight 5.0 t	7.5 m							6.38 *	6.38 *			4.89 *	4.89 *	6.64
	6.0 m							6.51 *	6.51 *	5.43 *	4.9	4.62 *	4.62 *	7.67
	4.5 m							7.26 *	6.83	6.63 *	4.82	4.59 *	4.07	8.31
	3.0 m					10.85 *	9.98	8.34 *	6.51	6.98	4.67	4.73 *	3.75	8.64
	1.5 m					12.84 *	9.34	9.38 *	6.2	6.81	4.52	5.05 *	3.64	8.70
	0.0 m			6.82 *	6.82 *	13.75 *	9.01	9.32	5.99	6.69	4.4	5.6	3.71	8.49
	-1.5 m	7.82 *	7.82 *	11.85 *	11.85 *	13.64 *	8.93	9.22	5.9	6.64	4.36	6.08	4.02	8.00
	-3.0 m	12.99 *	12.99 *	17.47 *	17.47 *	12.57 *	9.02	9.27	5.94			7.17	4.71	7.17
	-4.5 m			13.74 *	13.74 *	10.13 *	9.28					7.35 *	6.42	5.83

Narrow track width: 3000 mm • W/O Bucket

Unit: 1000 kg	A	1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		Max. reach		
	B													A
One-piece boom 5.9 m Arm 3.0 m Shoe 600 mm Counterweight 5.0 t	7.5 m							6.38 *	6.38 *			4.89 *	4.89 *	6.64
	6.0 m							6.51 *	6.37	5.43 *	4.4	4.62 *	4.22	7.67
	4.5 m							7.26 *	6.14	6.63 *	4.32	4.59 *	3.64	8.31
	3.0 m					10.85 *	8.85	8.34 *	5.82	6.79	4.18	4.73 *	3.35	8.64
	1.5 m					12.84 *	8.24	9.29	5.51	6.62	4.02	5.05 *	3.24	8.70
	0.0 m			6.82 *	6.82 *	13.75 *	7.92	9.05	5.31	6.49	3.91	5.43	3.3	8.49
	-1.5 m	7.82 *	7.82 *	11.85 *	11.85 *	13.64 *	7.84	8.95	5.22	6.45	3.87	5.9	3.57	8.00
	-3.0 m	12.99 *	12.99 *	17.47 *	15.48	12.57 *	7.92	9	5.26			6.96	4.18	7.17
	-4.5 m			13.74 *	13.74 *	10.13 *	8.18					7.35 *	5.7	5.83



: Rating over front.  
 : Rating over side or 360°.

- Lifting capacities are in compliance with ISO 10567:2007(E).
- The load point is at the end of the arm.
- \* = The nominal loads are based on hydraulic capacity.
- The nominal loads shown do not exceed 75% of tipping loads or 87% of hydraulic lifting capacity.
- For lifting capacity with bucket, simply subtract the actual weight of the bucket from the values.
- The configurations indicated do not necessarily reflect the standard equipment of the machine.

# Lifting capacities

## DX255LC-5

Standard track width: 3200 mm • W/O Bucket

Unit: 1000 kg	A	1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		Max. reach		
	B															A
Two-piece boom 6.09 m Arm 3.0 m Shoe 600 mm Counterweight 5.0 t	9.0 m					7.47 *	7.47 *							5.54 *	5.54 *	5.50
	7.5 m							7.08 *	7.07					4.78 *	4.78 *	7.04
	6.0 m					7.29 *	7.29 *	7.68 *	6.96	6.54 *	4.79			4.47 *	4.23	8.02
	4.5 m					10.95 *	10.5	8.72 *	6.67	6.83 *	4.68			4.38 *	3.68	8.63
	3.0 m					12.61 *	9.62	9.44 *	6.29	6.83	4.5			4.45 *	3.4	8.95
	1.5 m					13.53 *	8.92	9.3	5.94	6.63	4.33	4.73 *	3.31	4.67 *	3.31	9.01
	0.0 m					13.18 *	8.61	9.05	5.72	6.5	4.2			5.08 *	3.38	8.81
	-1.5 m			9.73 *	9.73 *	11.80 *	8.56	8.96	5.64	6.46	4.17			5.6	3.65	8.33
	-3.0 m					9.44 *	8.69	7.39 *	5.7	4.94 *	4.27			4.83 *	4.25	7.54

Narrow track width: 3000 mm • W/O Bucket

Unit: 1000 kg	A	1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		Max. reach		
	B															A
Two-piece boom 6.09 m Arm 3.0 m Shoe 600 mm Counterweight 5.0 t	9.0 m					7.47 *	7.47 *							5.54 *	5.54 *	5.50
	7.5 m							7.08 *	6.5					4.78 *	4.78 *	7.04
	6.0 m					7.29 *	7.29 *	7.68 *	6.39	6.54 *	4.39			4.47 *	3.87	8.02
	4.5 m					10.95 *	9.55	8.72 *	6.1	6.83 *	4.28			4.38 *	3.36	8.63
	3.0 m					12.61 *	8.7	9.44 *	5.73	6.8	4.11			4.45 *	3.1	8.95
	1.5 m					13.53 *	8.02	9.27	5.39	6.61	3.93	4.73 *	3.01	4.67 *	3	9.01
	0.0 m					13.18 *	7.71	9.02	5.17	6.48	3.81			5.08 *	3.06	8.81
	-1.5 m			9.73 *	9.73 *	11.80 *	7.67	8.93	5.09	6.43	3.78			5.58	3.31	8.33
	-3.0 m					9.44 *	7.79	7.39 *	5.15	4.94 *	3.88			4.83 *	3.86	7.54





# Standard and optional equipment

## Engine

Doosan DLo6, Stage IV compliant, SCR, EGR, DOC, water-cooled diesel engine with Wastegate Turbocharger and air-to-air intercooler	●
Auto-idle function	●
Auto shut-off	●
No DPF	●

## Hydraulic system

Boom and arm flow regeneration	●
Swing anti-rebound valves	●
Spare ports (valve)	●
One-touch power boost function	●
Smart Power Control (SPC)	●
Breaker piping	●
Cylinder cushioning & contamination seals	●
Control of auxiliary hydraulic flow and pressure from the display panel	●

## Cab & Interior

Pressurised, sound-insulated and CabSus mounted cab	●
Heated, adjustable air suspension seat with adjustable headrest and armrest	●
Air conditioning with climate control	●
Pull-up type front window with sun roller blind and removable lower front window	●
Sliding left window	●
Intermittent upper and lower windshield wiper	●
Rain visor	●
Rear window defroster switch	●
Adjustable PPC wrist control levers for arm, boom, bucket and swing	●
Joysticks and pedals provide proportional control of auxiliary lines for attachments	●
Travel pedals and hand levers	●
Jog shuttle switch	●
7" (18 cm) TFT LCD colour monitor panel	●
Attachment management system	●
Engine speed (RPM) control dial	●
Automatic travel speed	●
4 operating modes & 4 working modes	●
Electric horn	●
Cigarette lighter	●
Ceiling light	●
Cup holder	●
Multiple storage compartments (e.g. document holder under seat)	●
Storage area (tools, etc.)	●
Hot and cool box	●
Flat, spacious, easy-to-clean floor	●
Master key	●
Anti-theft protection	●
12 V spare power socket	●
Serial communication port for laptop PC interface	●
Remote radio ON/OFF switch	●
Loudspeakers and connections for radio	●
MP3/USB radio or MP3/USB radio with CD player	○

## Safety

Roll Over Protective Structure (ROPS)	●
Boom and arm cylinder safety valves	●
Overload warning device	●
Large guard rails on upper structure and steps	●
Rotating beacon	●
Rear-view camera	●
Punched metal anti-slip plates	●
Hydraulic safety lock lever	●
Safety glass	●
Hammer for emergency escape	●
Right and left rear-view mirrors	●
Lockable fuel cap and covers	●
Battery cut-off switch	●
Engine restart prevention system	●
Parking brake	●
Work lights (2 front frame, 4 front cab-mounted, 2 rear cab-mounted, 2 boom-mounted and 1 rear side)	●
Emergency engine stop switch and hydraulic pump control switch	●
FOGS cab - top and front cab guards (ISO 10262)	○
Front window upper and lower guards	○
Side-view camera	○

## Other

Boom: 5900 mm – arm: 3000 mm – counterweight: 5000 kg	●
"Doosan Connect" Telematic system	●
Auto shut-off fuel filler pump	●
Double element air cleaner and pre-filtered Cyclone Turbo dust separator	●
Fuel pre-filter with water separator sensor	●
Dust screen for radiator/oil cooler	●
Self-diagnostic function	●
Alternator (24 V, 80 A) - Battery (2 × 12 V, 150 Ah)	●
Hydrostatic 2-speed travel system with automatic shift	●
Remote greasing for swing circle and work group pivot points	●
Guards for work lights	●

Arms: 2500 mm or 3500 mm	○
Booms: one-piece boom 5900 mm or two-piece boom 6090 mm	○
Heavy-duty bottom cover	○
Doosan buckets: full range of GP, HD & Rock buckets	○
Doosan breakers and Doosan quick-couplers	○
Hydraulic piping for crusher, quick-coupler, clamshell, tilting and rotating buckets	○
Additional filter for breaker piping	○
Floating boom	○
Double pump flow	○
Engine coolant heater	○
Straight travel pedal (not to be combined with two-piece boom)	○
Bio oil	○
Automatic lubrication system	○
Alarm for travel & swing	○

## Undercarriage

Narrow undercarriage	○
Hydraulic track adjuster	●
Normal track guards	●
Greased and sealed track links	●
600 mm triple grouser shoe	●
700, 800, 900 mm triple grouser shoe	○

Standard: ●  
Optional: ○



Engine coolant heater



Straight travel pedal



Two-piece boom



Doosan buckets



Doosan breakers and quick-couplers

Some of these options may be standard in some markets. Some of these options may not be available for certain markets. Please check with your local DOOSAN dealer for more information about availability or to adapt your machine to your application needs.