

DEVELON

Wheel Loaders

DL320-7

DL380-7



	DL320-7	DL380-7
Maximum power	271 hp	271 hp
Operating weight	19.7 t	20.3 t
Bucket capacity	3.3 m ³	3.7 m ³





DEVELON DL320-7 AND DL380-7 WHEEL LOADERS:

MEET THE NEW GENERATION OF DEVELON MACHINES

**Boost your productivity with the new
DL320-7 and DL380-7 Develon wheel loaders.**

**Exceptional power – combined with the finest workmanship –
results in machines that perform at the highest level.**



The DL320-7 and DL380-7 enhance your output from every angle

Impressive breakout force and high traction make penetration easy and allow you to tackle the hardest materials.

- Powerful hydraulic system makes work quick and efficient.
- Develon DLo8 engine provides the power you need while meeting Stage V environmental regulations. The combination of these features gives Develon wheel loaders excellent penetration power, ensuring optimum bucket load in each cycle.

TOP PERFORMANCE AND FUEL EFFICIENCY

ENVIRONMENT-FRIENDLY POWER

The DL320-7 and DL380-7 are powered by a Develon DL08 engine compliant with the Stage V emissions regulations. High-pressure fuel injection and precise timing provide highly efficient fuel burn and perfect combustion. The aftertreatment system is composed of a selective catalytic reduction module, an oxidation catalyst, and a long-life particulate filter to reduce emissions without requiring an EGR (exhaust gas recirculation) valve.

EFFICIENT POWER MANAGEMENT

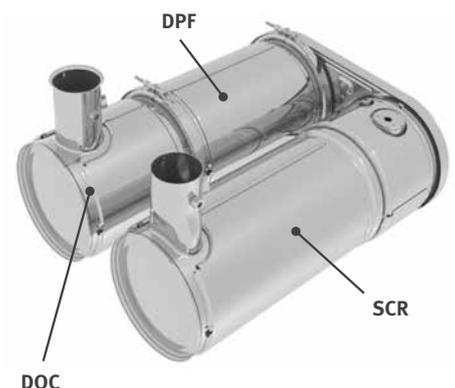
You can select from 3 different engine working modes – SAT, Standard and Power – while the Power-up function lets you switch the parameters to level-up working mode with lower transmission shift intervals by fully applying the acceleration pedal. The latest generation of automatic power management settings – Situation Awareness Technology 2 – automatically monitors the machine's activity and adjusts the engine's output according to the result of the real-time analysis.

VARIABLE GEOMETRY TURBOCHARGER

Optimizes boost pressure over wide range of engine speeds. The turbocharger generates higher torque, provides faster response, and reduces fuel consumption.

SAVE FUEL, SAVE MONEY

- **Auto Idle**
The standard auto idle feature automatically reduces the engine revs to standby idle a few seconds after the steering wheel, gearshift control lever and accelerator cease movement. This reduces noise, improves jobsite communications and saves fuel. When you move the controls, the loader automatically returns to working idle.
- **Auto Shutdown**
When enabled, the engine automatically shuts down after idle time reaches a specified elapsed time (3 to 60 minutes).





RELIABILITY – THE HABIT OF A LIFETIME

In your profession, you need equipment you can depend on. At Develon, we put durability and reliability at the core of our machines' development. Our materials and structures undergo stringent testing for strength and resilience under the most extreme conditions.

DESIGNED FOR LONG-TERM, ALL-ROUND, HEAVY-DUTY PERFORMANCE

POWERTRAIN

The Develon transmission has 5 gears to boost acceleration performance, especially on climbs with the lock-up. The gear ratios are optimized, and smooth, shock-free shifts contribute to the high overall level of operator comfort. Traction force is also maximized. Together, these qualities enable high working speed in all conditions.

AXLE

New stronger axle allows you to carry more.

- Limited slip differentials at the front and rear automatically ensure maximum traction and easy driving over soft and muddy ground with no need for a manual differential lock.
- Hydraulic differential lock on the front engages automatically to ensure maximum tractive effort with a lock of 100% and driving ease. Muddy and slippery areas can be navigated by the operator with the manual foot control. These features also reduce the risk of skidding and prevent excessive tire wear.
- The brake discs in the planetary reduction gears are reinforced, ensuring long hours of operation and easy maintenance access.

ROBUST AND RELIABLE

We pay the closest attention to the design and manufacture of structural components. Finite Element Analysis is used to ensure an extended lifetime for main structures such as the chassis, joints and lift arm. Then, after modelling, they are subjected to intensive laboratory and field testing in extreme conditions. Ongoing statistical analysis is used to continually increase reliability.

DURABLE STEEL PARTS

Rear parts – such as the radiator grille, engine hood and fenders – are made of durable steel. They're also designed for easy repair, reducing the need to replace them if they are damaged.

EXHAUST

The inner exhaust pipe sucks air out of the engine compartment through an outer pipe – this 'chimney' effect provides constant air circulation and prevents deposits of flammable material on hot parts.

FAST CYCLE TIMES

The entire Develon wheel loader lineup is carefully engineered for a perfect balance of speed and controllability – so you benefit from optimal production. Variable displacement piston pumps in all models allow Develon wheel loaders to power through difficult jobs with minimal fuel consumption and multifunction operation of the lift arm and bucket.

FULL FENDERS

To keep them clean and avoid mud splashing on the windows or accidents on slippery steps, Develon's wheel loaders are standard equipped with full fenders and mud guards. Enlarged front fenders protect front windows and ensure maximum operator visibility.

DRIVING ASSISTANCE

- Automatic transmission with smooth shifting
- Automatic transmission kick-down
- Automatic Hydraulic Differential Lock (HDL)
- Automatic Load Isolation System (LIS)
- Automatic kick-out function on lift arm
- Automatic return to dig position
- Automatic reversing fan
- Automatic greasing system
- Automatic lock-up on torque converter





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OPERATING IN HIGH COMFORT



1. Develon Smart Touch
2. Intuitive gauge panel
3. Steering wheel adjustable in all directions
4. Integrated armrest with joystick
5. Control panel
6. Cup holders
7. Storage compartments
8. Premium seat with 3-point safety belt
9. Electric joystick steering

ADJUSTABLE STEERING COLUMN

Enhance your driving comfort, and work without fatigue, by easily adjusting the steering column's tilt and telescopic movements to fit your preferred position.

DEVELON SMART TOUCH

- An easy to read and use 8" touch screen integrates all functions in one place.
- All information about the machine, settings, rear-view camera, weighing system, A/C control, multimedia.
- Help function - operators can quickly and easily understand all functions without referring to the operator's manual.

ELECTRONIC JOYSTICK

Reduce your cycle times with fully integrated electronic joystick in right armrest. Sensitivity settings and shock prevention are designed to ensure maximum machine controllability and operator comfort. Less movement for repetitive tasks with auto-leveling function.

- **Return to Dig**
Sensors on the lift arm and bucket linkage allow you to change your 'return to dig' setting from inside the cab. The cylinders and cutting edge return to the same position every time, enabling more efficient, consistent work.
- **Lift Kickout**
Set the maximum lift height for working inside buildings or other areas with height restrictions. Simply pull back on the control joystick to override.

ELECTRIC JOYSTICK STEERING (OPTION)

Keep your concentration and reduce strain with the comfortable joystick steering integrated on the armrest. Drive your machine easily, especially in repetitive tasks and tight spaces. You can customize the sensitivity level – from low to high. For better controllability, steering sensitivity changes with travel speed.

LUXURY CHAIR

Improved high comfortable seat with vertical and horizontal low-frequency suspension, pneumatic lumbar support, heating and 3-point safety belt with alarm icon on gauge panel and in Develon Smart Touch.





TAKE A SEAT IN BUSINESS CLASS

The ergonomic controls and the easy-to-view color monitor place the machine firmly in your hands.

TOTAL CONTROL IN ALL SIMPLICITY

DEVELON SMART KEY

We bring automotive standards and comfort to construction machinery

- Search function
- Coming/leaving home light function
- Remote door opening
- Keyless engine start

DEVELON SMART GUIDANCE SYSTEM

Boost your performance and reduce fuel consumption based on the system's recommendation. Machine automatically monitors and analyses driving strategy and recommends how to improve settings.

SPACIOUS CAB

Re-designed interior offers much larger, quieter and more comfortable operator environment, which improves safety and productivity and helps the operator work with high concentration. Increased leg room with re-designed accelerator and brake pedal position. Enlarged storage area and cool-box position increase operator comfort. Improved air conditioning system, with optimized air circulation, ensures a pleasant working environment.

VISIBILITY

Completely re-designed cab improves operator comfort and safety. Enlarged front windshield ensures better front visibility, while larger mirrors extend operator's view on the sides and rear - providing maximum safety for pedestrians and machine and improving productivity at the same time.

COMFORTABLE AUTOMATIC LIFT ARM

Save time and reduce the number of operations with the new bucket leveling function. Automatically return the bucket to dig position from roll back or dump position. Automatic function is also available for lift arm positions.

EASY ENTRY AND EXIT

Grab handles and offset steps with slip-resistant surfaces provide safe & easy access to the cab and easy exit when work is finished. The door opens 180° - and can be locked in the open position - to provide a wide opening for moving in and out of the machine.



RAISE PROFITS, PRODUCTIVITY & FUEL EFFICIENCY

STRENGTH AND INTELLIGENCE – A WINNING COMBINATION!

With tremendous lift height and capacity, along with enough torque to bite into the toughest materials, Develon wheel loaders go a step beyond scooping, carrying and loading. It's your ticket to making harder work easier, longer days more enjoyable, and every minute more productive and profitable.

BOOST YOUR PRODUCTIVITY

- Ride control – Load Isolation System
- Bucket auto leveling function
- End-stroke cushioning for smooth arm and work tools movements
- Optimized shifting program

MAXIMUM SAFETY

- Rear-view camera
- Full hand rails for safe maintenance
- Up to 12 LED working lights available
- Rear-view mirrors with electric adjustment possibility
- 3-point safety belt

READY FOR VERSATILITY

- Improved Develon weighing system
- Attachments fully tailored for application
- Wide selection of tires

MAXIMIZE YOUR UPTIME

- Massive frame
- Automatic lubrication system
- Wide fin radiator and reversible fan



BUSINESS CLASS OPERATOR COMFORT

The new spacious cab offers an operator-friendly environment with top-class all-round visibility. It centers around a high comfortable seat with 3-point safety belt for maximum operator safety. The joystick is fully integrated in the seat's right armrest. The electrically adjustable rear mirror contributes to maximum operator comfort.



ALL-IN-ONE FOR BETTER PERFORMANCE

All important functions are easily accessible on the Develon Smart Touch

- Machine settings
- Rear-view camera
- Radio
- HVAC
- Weighing system
- Develon Smart Guidance

BETTER FUEL EFFICIENCY

The DL320-7 and DL380-7 are equipped with a powerful, new engine with low fuel consumption - without requiring an EGR (exhaust gas recirculation) valve.

I.C.C.O. (INTELLIGENT CLUTCH CUT-OFF)

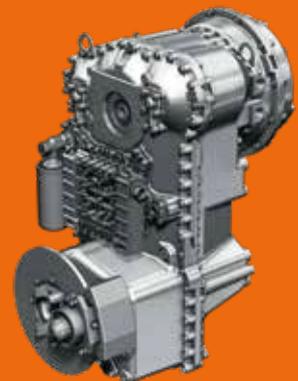
Need more engine power for lift arm speed? In lower gears, simply depress the left brake pedal to disengage the transmission. Disengage transmission cutout with your switch panel to start moving on an incline with greater ease.

SITUATION AWARENESS TECHNOLOGY 2

For maximum productivity and fuel efficiency.

TORQUE CONVERTER WITH LOCK-UP FUNCTION

The DL320-7 and DL380-7 also feature a torque converter lockup. When this is activated, the engine automatically connects directly to the transmission (depending on speed and travel resistance), even from 2nd gear. The transmission receives the full engine power without hydraulic slip – thus increasing speed on slope dramatically. This feature can save you up to 10% in fuel costs.





DEVELON

SIMPLE MAINTENANCE WITH MAXIMUM UPTIME

COOLING PACKAGE

Wide pitch fin radiators coupling with reversible fan keep the cooling system performing constantly - minimizing machine downtime and reducing daily maintenance. The operator can easily set standard intervals for fan reverse from the Develon Smart Touch. Performance is regulated for lower fuel consumption and shorter warm-up periods.

AIR INTAKE

Maintenance-free cyclone air pre-filter separates more than 99% of particles 20 microns in size and larger. Cleaning and cartridge replacement are only needed at long intervals. In addition to extending the air filter's lifetime, the pre-filter also ensures better combustion and a longer engine lifetime.

AUTOMATIC LUBRICATION SYSTEM

The DL320-7 and DL380-7 are standard equipped with a factory-fitted auto-lube system, with greasing point at the middle of the pin and bushing for better grease distribution and enhanced lifetime.

WE ARE HERE FOR YOU

Boost your productivity and machine uptime with our genuine Develon parts; Protection+, an extended warranty covering parts, travel and service (check with your local dealer); and a maintenance contract in which your dealer supports you with routine service at regular intervals.

SAFE ACCESS

To facilitate access and mobility on the machine, multiple platforms and hand-rails ensure that the operator always has a firm support to hold on to and 3-point contacts.



TECHNICAL SPECIFICATIONS

ENGINE

	DL320-7	DL380-7
Model	Develon DLo8	
No. of cylinders	6	
Max. power (SAE J1995)	202 kW/271 hp @ 1800 rpm	
Max. torque (SAE J1995)	1275 N·m @ 1300 rpm	
Displacement	7640 cm ³	
Bore × stroke	108 mm × 139 mm	
Starter	24 V / 6 kW	
Batteries - Alternator	2 × 12 V - 24 V, 80 A	
Air filter	Centrifugal pre-cleaner Top Spin™ Donaldson® with 2-stage dry filter	
Cooling	Cooling package with automatic reversing fan to facilitate radiator cleaning. Automatic rotation speed adjustment according to temperature conditions.	
Radiator	Wide fin radiator – Intercooler/Hydraulic oil cooler/Transmission oil cooler	

AXLES

	DL320-7	DL380-7
LSD lock ratio	30% (front & rear)	
HDL lock ratio	100% (front)	
Oscillation angle	+/- 12°	
Tire size - standard	23.5 R25	

TRANSMISSION

	DL320-7	DL380-7
Type	5-speed auto-powershift with lock-up	
Torque converter	Single stage / mono phase / fixed wheel stator	
Speeds - forward 1 / 2 / 3 / 4 / 5	6.1 / 11.5 / 17.6 / 27.4 / 40.0	6.4 / 11.3 / 17.1 / 25.6 / 40.0
Speeds - reverse 1 / 2 / 3	6.5 / 12.1 / 28.8	6.5 / 12.1 / 28.5
Maximum traction	18.7 ton	19.1 ton
Maximum gradeability	51% (27°)	

HYDRAULIC CYLINDERS

Cylinders	Quantity	Bore × rod diameter × stroke (mm)	
		DL320-7	DL380-7
Lift	2	150 × 95 × 800	
Bucket	1	180 × 105 × 535	

HYDRAULIC SYSTEM

	DL320-7	DL380-7
Type	Load sensing – closed center hydraulic system	
Main pump	Dual variable displacement axial pistons pumps	
Maximum flow	290 l/min	310 l/min
Maximum pressure	250 bar	265 bar
EMCV	Automatic functions for positioning the bucket ready to dig and a function for stopping the lift arm at the desired height.	
Filtration	In the oil return to the tank, the fiberglass filter has a filtering capability of 10 micron.	

LIFT ARM

Load cycle	DL320-7	DL380-7
Lift arm - up	5.8 s	
Lift arm - down	2.9 s	3.0 s
Bucket - dump	1.6 s	1.5 s

FLUID CAPACITIES

	DL320-7	DL380-7
Fuel tank	291 l	
DEF (AdBlue®) tank	62 l	
Cooling system (radiator)	45 l	
Engine oil	35 l	
Front axle	35 l	42 l
Rear axle	35 l	40 l
Hydraulic system	173 l	180 l
Hydraulic oil tank	117 l	
Transmission oil	42 l	

CAB

	DL320-7	DL380-7
Safety standards	ROPS ISO 3471:2008 FOPS ISO 3449	

Noise emissions	DL320-7	DL380-7
Operator Sound Pressure Level (ISO 6396)	67 dB	69 dB
Exterior Sound Power Level (ISO 6395)	105 dB	

STANDARD AND OPTIONAL EQUIPMENT

● Standard ○ Optional

Engine

- Exhaust aftertreatment (DOC + DPF + SCR)
- Auto idle function
- Auto shutdown function
- Variable Geometric Turbocharger (VGT)
- Air pre-cleaner (centrifugal)
- Situation Awareness Technology 2
- Fan – reversible, variable speed, with automatic function
- Wide fin radiator

Powertrain

- 5-gear powershift transmission
- Torque convertor with Lock-up
- Transmission mode management
- I.C.C.O. (Intelligent Clutch Cut-Off)
- Axle differential – Limited Slip Differential
- Axle differential – Hydraulic Differential Lock

Hydraulic

- Load sensing hydraulic system, variable displacement pump
- EMCV (Electric main control valve)
- 3rd spool valve
- MCV (Hydraulic pilot control)

Lift Arm

- Standard lift arm, Z-bar kinematic
- Hydraulic lift arm suspension – Load Isolation System (LIS)
- Smooth end position bucket & arm (only with EMCV)
- Position memories
- Automatic bucket position "return to dig"
- High lift arm, Z-bar kinematic

Work tools

- DOOSAN Quick Coupler
- DOOSAN Bucket
- DOOSAN Performance Bucket

Cab & operator comfort

- ROPS (ISO 3471:2008)/FOPS (ISO 3449) pressurized cab
- Grammer seat with vertical and horizontal low-frequency suspension, pneumatic lumbar support, heating, 3-point safety belt
- Joystick lever with FNR and thumbwheel roller integrated to the seat's right armrest
- DOOSAN Smart Key
- Door remote opening
- DOOSAN Smart Touch – 8" touch screen, all-in-one
- DOOSAN Smart Guidance System
- Rear-view mirrors – heated
- 12V socket
- USB socket
- Electric steering joystick on left armrest
- Fingertip control
- Rear-view mirrors – heated, electric adjustment

Safety

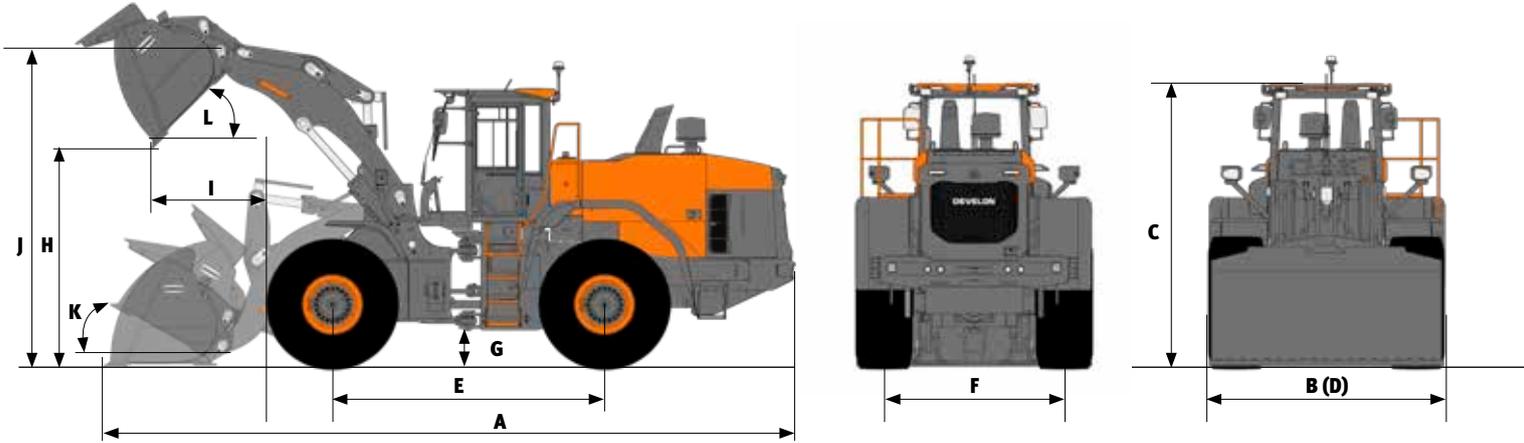
- Safety belt alarm
- Rear-view camera
- Full handrails and maintenance platforms
- Strobe reversing light
- LED working lights on cab (4× front + 4× rear)
- LED working lights on cab (6× front + 6× rear)

Other

- Automatic lubrication system
- 23,5R25 (L3)
- 23,5R25 (L4)
- 23,5R25 (L5)
- Additional counterweight
- DOOSAN weighing system



PERFORMANCE DATA & DIMENSIONS



DL320-7

Pin-on Ground engaging tools	Unit	Performance bucket				Eco bucket		High lift
		General purpose		Material handling		General purpose		
		3.7 m ³ TEETH	3.8 m ³ BOCE	3.7 m ³ TEETH	3.8 m ³ BOCE	3.3 m ³ TEETH	3.5 m ³ BOCE	
Capacity heaped ISO/SAE	m ³	3.7	3.8	3.7	3.8	3.3	3.5	=
Capacity at 110% fill factor	m ³	4.1	4.2	4.1	4.2	3.6	3.9	=
B Bucket width	mm	2910	2910	2910	2910	3000	3000	=
Breakout force	kN	143	137	151	145	170	157	-3
Static tipping load (straight)	kg	15488	15397	15552	15461	15948	15813	-3690
Static tipping load (full turn - 40°)	kg	13640	13549	13697	13605	14079	13943	-3258
H Dump height (at 45° - fully raised)	mm	2837	2933	2887	2983	2887	3039	+531
I Dump reach (at 45° - fully raised)	mm	1427	1341	1378	1292	1360	1227	+212
Digging depth	mm	83	77	83	77	96	84	+143
J Height at bucket pivot point	mm	4175	4175	4175	4175	4175	4175	+525
Max. tilt angle in carry position	°	48	48	48	48	49	49	+2
Max. tilt angle fully raised	°	57	57	57	57	57	57	-3
K Max. tilt angle on ground	°	43	43	43	43	44	44	-26
Max. tilt angle at max. reach	°	58	58	58	58	58	58	-4
Max. dump angle at max. reach	°	83	83	83	83	83	83	+4
Max. dump angle on ground	°	79	78	78	78	78	77	+5
L Max. dump angle fully raised	°	45	45	45	45	45	45	=
External radius - tire side	mm	6009	6009	6009	6009	6009	6009	=
External radius - bucket edge	mm	6741	6681	6709	6650	6748	6656	+307
E Wheel base	mm	3300	3300	3300	3300	3300	3300	=
D Width at tires edge	mm	2845	2845	2845	2845	2845	2845	=
F Tread	mm	2150	2150	2150	2150	2150	2150	=
G Ground clearance (at 12° osc.)	mm	400	400	400	400	400	400	=
A Overall length	mm	8602	8470	8532	8400	8530	8319	+635
C Overall height	mm	3511	3511	3511	3511	3511	3511	=
Operating weight	kg	19774	19869	19774	19869	19493	19634	+796

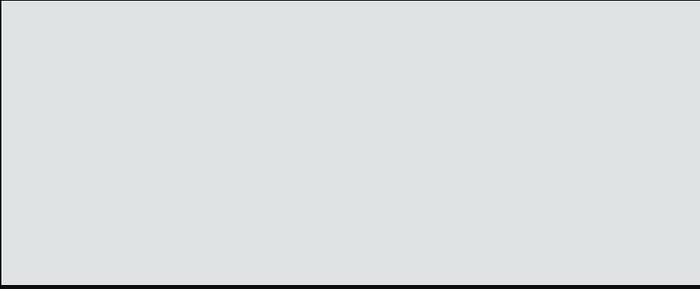
All capacities according ISO 7546, with straight blade [measure at the tip of bucket teeth or cutting edge], tires 23.5 R25 (L3), base EU configuration.



DL380-7

Pin-on		Unit	Performance bucket				Eco bucket		High lift
			General purpose		Material handling		General purpose		
Ground engaging tools			3.9 m ³ TEETH	4.0 m ³ BOCE	3.9 m ³ TEETH	4.1 m ³ BOCE	3.7 m ³ TEETH	3.9 m ³ BOCE	
	Capacity heaped ISO/SAE	m ³	3.9	4	3.9	4.1	3.7	3.9	=
	Capacity at 110% fill factor	m ³	4.3	4.4	4.3	4.5	4.1	4.3	=
B	Bucket width	mm	2910	2910	2910	2910	3110	3110	=
	Breakout force	kN	146	140	151	145	181	168	-4
	Static tipping load (straight)	kg	15876	15782	15845	15751	16248	16097	-4037
	Static tipping load (full turn - 40°)	kg	13976	13882	13943	13849	14341	14190	-3565
H	Dump height (at 45° - fully raised)	mm	2802	2897	2837	2933	2887	3047	+531
I	Dump reach (at 45° - fully raised)	mm	1462	1376	1427	1341	1360	1220	+212
	Digging depth	mm	83	77	83	77	96	84	+143
J	Height at bucket pivot point	mm	4175	4175	4175	4175	4175	4175	+525
	Max. tilt angle in carry position	°	48	48	48	48	49	49	+3
	Max. tilt angle fully raised	°	66	66	66	66	66	66	-3
K	Max. tilt angle on ground	°	13	13	13	13	18	18	=
	Max. tilt angle at max. reach	°	68	68	68	68	68	68	-6
	Max. dump angle at max. reach	°	66	66	66	66	66	66	=
	Max. dump angle on ground	°	60	60	60	60	60	59	+2
L	Max. dump angle fully raised	°	45	45	45	45	45	45	=
	External radius - tire side	mm	6009	6009	6009	6009	6009	6009	=
	External radius - bucket edge	mm	6764	6703	6741	6681	6797	6702	+305
E	Wheel base	mm	3300	3300	3300	3300	3300	3300	=
D	Width at tires edge	mm	2845	2845	2845	2845	2845	2845	=
F	Tread	mm	2150	2150	2150	2150	2150	2150	=
G	Ground clearance (at 12° osc.)	mm	400	400	400	400	400	400	=
A	Overall length	mm	8652	8520	8602	8470	8530	8309	+635
C	Overall height	mm	3511	3511	3511	3511	3511	3511	=
	Operating weight	kg	20587	20682	20631	20726	20269	20421	+320

All capacities according ISO 7546, with straight blade [measure at the tip of bucket teeth or cutting edge], tires 23.5 R25 (L3), base EU configuration.



Powered by Innovation

DISCOVER MORE:
DL320-7



DL380-7



DEVELON

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