

DEVELON

Wheel Loaders

DL420-7

DL480-7



	DL420-7	DL480-7
Maximum power	345 hp	345 hp
Operating weight	23.4 t	26.5 t
Bucket capacity	4.3 m ³	4.8 m ³





**DEVELON DL420-7 AND
DL480-7 WHEEL LOADERS:**

MEET THE NEW GENERATION OF DEVELON MACHINES

**Boost your productivity with the new
DL420-7 and DL480-7 Develon wheel loaders.**

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



The DL420-7 and DL480-7 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.
 - Scania DC13 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 DL420-7 and DL480-7 are powered by a Scania DC13 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

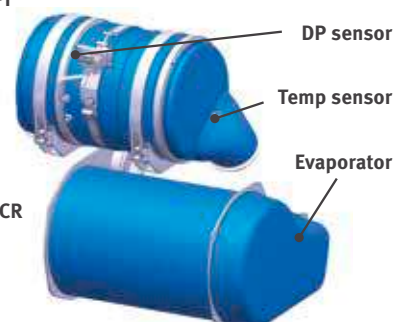
Optimizes boost pressure over wide range of engine speeds. The turbocharger generates higher torque, provides faster response, and reduces fuel consumption.

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).



DOC + DPF





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.

- 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.
- Axle oil cooler is available for the most demanding conditions. Fully independent cooling circuit with filters for each axle.

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

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
- DEVELON Fleet Management Web



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 DL420-7 and DL480-7 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 DL420-7 and DL480-7 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.





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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 DL420-7 and DL480-7 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.

FLEET MANAGEMENT

With DEVELON Fleet Management Web, you can proactively react to machine status, properly plan maintenance, and reduce downtime.



TECHNICAL SPECIFICATIONS

ENGINE

	DL420-7	DL480-7
Model	Scania DC13	
No. of cylinders	6	
Max. power (SAE J1995)	257 kW/345 hp @ 1800 rpm	
Max. torque (SAE J1995)	2196 N·m @ 1100 rpm	
Displacement	12700 cm ³	
Bore × stroke	130 mm × 160 mm	
Starter	24 V / 6 kW	
Batteries - Alternator	2 × 12 V, 200 Ah - 28 V, 100 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

	DL420-7	DL480-7
LSD lock ratio	30% (front & rear)	
HDL lock ratio	100% (front)	
Oscillation angle	+/- 12°	
Tire size - standard	26.5R25	

LIFT ARM

Load cycle	DL420-7	DL480-7
Lift arm - up	6 s	6.3 s
Lift arm - down	2.7 s	
Bucket - dump	2 s	1.7 s

HYDRAULIC CYLINDERS

Cylinders	Quantity	Bore × rod diameter × stroke (mm)	
		DL420-7	DL480-7
Lift	2	150 × 95 × 795	170 × 105 × 789
Bucket	1	160 × 100 × 615	190 × 120 × 590

TRANSMISSION

	DL420-7	DL480-7
Type	5-speed auto-powershift with lock-up	
Torque converter	Single stage / mono phase / fixed wheel stator	
Speeds - forward 1 / 2 / 3 / 4 / 5	7.2 / 13.6 / 19.7 / 38.3 / 40	6.2 / 11.7 / 18.4 / 26.5 / 40
Speeds - reverse 1 / 2 / 3	7.2 / 13.6 / 19.7	6.2 / 11.7 / 26.5
Maximum traction	22.4 ton	24.2 ton
Maximum gradeability	51% (27°)	

HYDRAULIC SYSTEM

	DL420-7	DL480-7
Type	Load sensing – closed center hydraulic system	
Main pump	Dual variable displacement axial pistons pumps	
Maximum flow	476 l/min	
Maximum pressure	315 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.	

CAB

	DL420-7	DL480-7
Safety standards	ROPS ISO 3471:2008 FOPS ISO 3449	
Noise emissions	DL420-7	DL480-7
Operator Sound Pressure Level (ISO 6396)	71 dB	
Exterior Sound Power Level (ISO 6395)	107 dB	108 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 – Hydraulic Differential Lock
- Axle differential – Limited Slip Differential
- Axles oil cooler

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

- DEVELON Quick Coupler
- DEVELON Bucket
- DEVELON 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
- Electric joystick steering on left armrest
- DEVELON Smart Key
- Door remote opening
- DEVELON Smart Touch – 8" touch screen, all-in-one
- DEVELON Smart Guidance System
- Rear-view mirrors – heated
- DEVELON Fleet Management Web (telematic system)
- 12V socket
- USB socket
- 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
- 26.5R25 (L3)
- 26.5R25 (L4)
- 26.5R25 (L5)
- Additional counterweight
- DEVELON weighing system

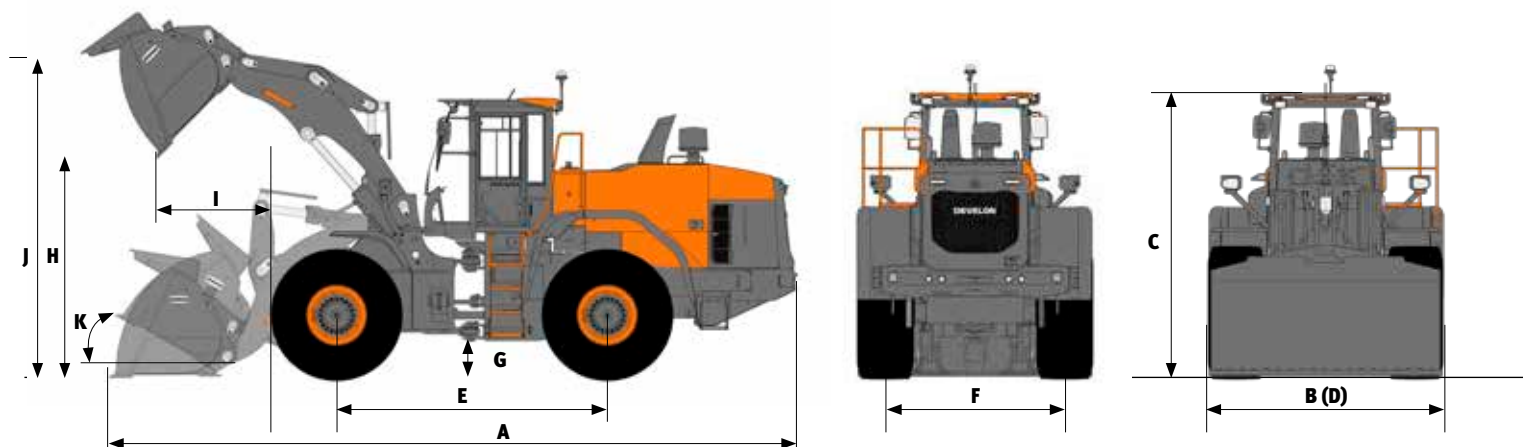
BRAKES

Dual multi-disc circuit with sintered metal discs for extended service life. Braking system activated by a pump and accumulator circuits. Spring-applied, hydraulically released parking brake is mounted on the transmission shaft and accumulator circuits and is electronically activated. Brake type: spring-applied / hydraulically released. Brake pump with variable displacement axial pistons provide 58 l/min. Operator can activate/deactivate the Intelligent Clutch Cut-Off on the brake pedal from a switch and can adjust the sensor proximity with the same switch. The emergency brakes are composed of a double system continually under pressure by accumulators.

FLUID CAPACITIES

	DL420-7	DL480-7
Fuel tank	313 l	332 l
DEF (AdBlue®) tank	60 l	
Cooling system (radiator)	55 l	52 l
Engine oil	45 l	
Front axle	42 l	62 l
Rear axle	42 l	
Hydraulic system	223 l	226 l
Hydraulic oil tank	125 l	126 l
Transmission oil	55 l	60 l

PERFORMANCE DATA & DIMENSIONS



DL420-7

Pin-on		Unit	Performance bucket				Eco bucket		High lift
			General purpose		Material handling		General purpose		
Ground engaging tools			4.5 m³ BOCE	4.4 m³ BOT	4.9 m³ BOCE	4.7 m³ BOT	4.3 m³ BOT	4.5 m³ BOCE	
			straight sides	straight sides	convex sides	convex sides	straight sides	straight sides	
Configuration									
	Capacity heaped ISO/SAE	m³	4.5	4.4	4.9	4.7	4.3	4.5	=
	Capacity at 110% fill factor	m³	4.9	4.8	5.3	5.2	4.8	5.0	=
B	Bucket width	mm	3000	3000	3000	3000	3200	3200	-5
	Breakout force	kN	167	173	167	172	183	171	=
	Static tipping load (straight)	kg	19287	19347	19250	19310	19351	18696	-2838
	Static tipping load (full turn - 40°)	kg	17273	17334	17235	17295	17071	16493	-2591
H	Dump height (at 45° - fully raised)	mm	2911	2719	2911	2719	2835	2990	+483
I	Dump reach (at 45°- fully raised)	mm	1342	1503	1342	1503	1465	1320	+72
	Digging depth	mm	145	165	145	165	110	115	+119
J	Height at bucket pivot point	mm	4265	4265	4265	4265	4265	4265	+480
	Max. tilt angle in carry position	°	50	50	50	50	48	48	+4
	Max. tilt angle fully raised	°	63	63	63	63	62	62	+1
K	Max. tilt angle on ground	°	44	45	44	45	43	43	+1
	Max. tilt angle at max. reach	°	59	59	59	59	59	59	=
	Max. dump angle at max. reach	°	72	72	72	72	71	71	-10
	Max. dump angle on ground	°	64	64	64	64	65	65	-1
L	Max. dump angle fully raised	°	46	46	46	46	45	45	-1
	External radius - tire side	mm	6388	6388	6388	6388	6388	6388	=
	External radius - bucket edge	mm	7028	7146	7028	7146	7065	7000	+212
E	Wheel base	mm	3525	3525	3525	3525	3525	3525	=
D	Width at tires edge	mm	2982	2982	2982	2982	2982	2982	=
F	Tread	mm	2300	2300	2300	2300	2300	2300	=
G	Ground clearance (at 12° osc.)	mm	495	495	495	495	495	495	=
A	Overall length	mm	9244	9510	9244	9510	9138	8926	+471
C	Overall height	mm	3660	3660	3660	3660	3660	3660	=
	Operating weight	kg	23437	23373	23494	23430	23419	23570	+585

All capacities according ISO 7546, with straight blade [measure at the tip of bucket teeth or cutting edge], tires 26.5 R25 (L3), base EU configuration.



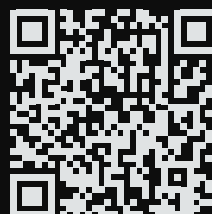
DL480-7

Pin-on		Unit	Performance bucket				Eco bucket		High lift
			General purpose		Material handling		General purpose		
Ground engaging tools			4.8 m³ BOT	5.0 m³ BOCE	4.8 m³ BOT	5.0 m³ BOCE	4.8 m³ BOT	5.0 m³ BOCE	
			straight sides	straight sides	convex sides	convex sides	straight sides	straight sides	
Configuration									
	Capacity heaped ISO/SAE	m³	4.8	5.0	4.8	5.0	4.8	5.0	=
	Capacity at 110% fill factor	m³	5.3	5.5	5.3	5.5	5.3	5.5	=
B	Bucket width	mm	3300	3300	3300	3300	3300	3300	=
	Breakout force	kN	221	209	231	218	224	211	-9
	Static tipping load (straight)	kg	20743	20650	20769	20675	20717	20591	-4684
	Static tipping load (full turn - 40°)	kg	18309	18215	18331	18238	18282	18155	-4139
H	Dump height (at 45° - fully raised)	mm	3045	3165	3088	3208	3017	3178	+487
I	Dump reach (at 45°- fully raised)	mm	1494	1338	1452	1296	1469	1330	+201
	Digging depth	mm	58	86	58	86	95	83	+167
J	Height at bucket pivot point	mm	4519	4519	4519	4519	4519	4519	+487
	Max. tilt angle in carry position	°	48	48	48	48	49	49	+3
	Max. tilt angle fully raised	°	67	67	67	67	67	67	-4
K	Max. tilt angle on ground	°	19	19	19	19	20	19	-3
	Max. tilt angle at max. reach	°	65	65	65	65	65	65	-4
	Max. dump angle at max. reach	°	70	70	70	70	70	70	-6
	Max. dump angle on ground	°	64	63	64	63	64	63	-3
L	Max. dump angle fully raised	°	46	46	46	46	46	46	=
	External radius - tire side	mm	6483	6483	6483	6483	6483	6483	=
	External radius - bucket edge	mm	7338	7260	7310	7234	7352	7253	+296
E	Wheel base	mm	3550	3550	3550	3550	3550	3550	=
D	Width at tires edge	mm	3095	3095	3095	3095	3095	3095	=
F	Tread	mm	2300	2300	2300	2300	2300	2300	=
G	Ground clearance (at 12° osc.)	mm	455	455	455	455	455	455	=
A	Overall length	mm	9423	9250	9363	9190	9454	9233	+602
C	Overall height	mm	3635	3635	3635	3635	3635	3635	=
	Operating weight	kg	26409	26504	26410	26505	26444	26573	+265

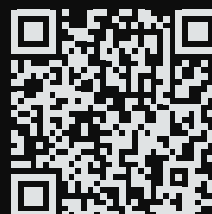
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Powered by **Innovation**

DISCOVER MORE:
DL420-7



DL480-7



DEVELON

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