# **DEVELON**

**Wheel Loaders** 

# DL550-7 DL580-7





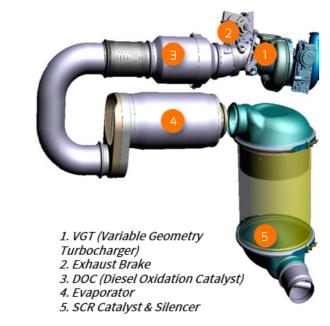


#### The DL550-7 and DL580-7 enhance your output from every angle

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

- A powerful hydraulic system makes work quick and efficient.
- Scania DC13 engine provides the power you need while meeting Tier4 Final environmental regulations.
   The combination of these features gives DEVELON wheel loaders excellent penetration power, ensuring optimum bucket load in each cycle.





#### **ENVIRONMENT-FRIENDLY POWER**

The DL550-7 and DL580-7 are powered by a Scania DC13 engine compliant with the Tier4 Final emissions regulations. High-pressure fuel injection and precise timing provide highly efficient fuel burn and perfect combustion. Electronic engine controls optimise machine performance and manage the catalytic operations by a Diesel Oxidation Catalyst (DOC) and a Selective Catalytic Reduction (SCR).

#### **EFFICIENT POWER MANAGEMENT**

You can select from 3 different engine working modes – ECO, 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.

#### **VARIABLE GEOMETRY TURBOCHARGER**

A 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).

# 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.

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.

ensuring long hours of operation and easy maintenance access.

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

# 1. DEVELON Smart Touch 2. Intuitive gauge panel 3. Steering wheel adjustable 4. Integrated armrest with joystick Storage compartments Premium seat with 3-point Electric joystick steering

# OPERATING IN HIGH COMFORT

#### **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.



# 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  $180^\circ$  - 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 movementsOptimized shifting program

#### **MAXIMUM SAFETY**



#### **READY FOR VERSATILITY**

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

#### **MAXIMIZE YOUR UPTIME**

- Massive frame
- Automatic lubrication system
- 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 DL550-7 and DL580-7 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.

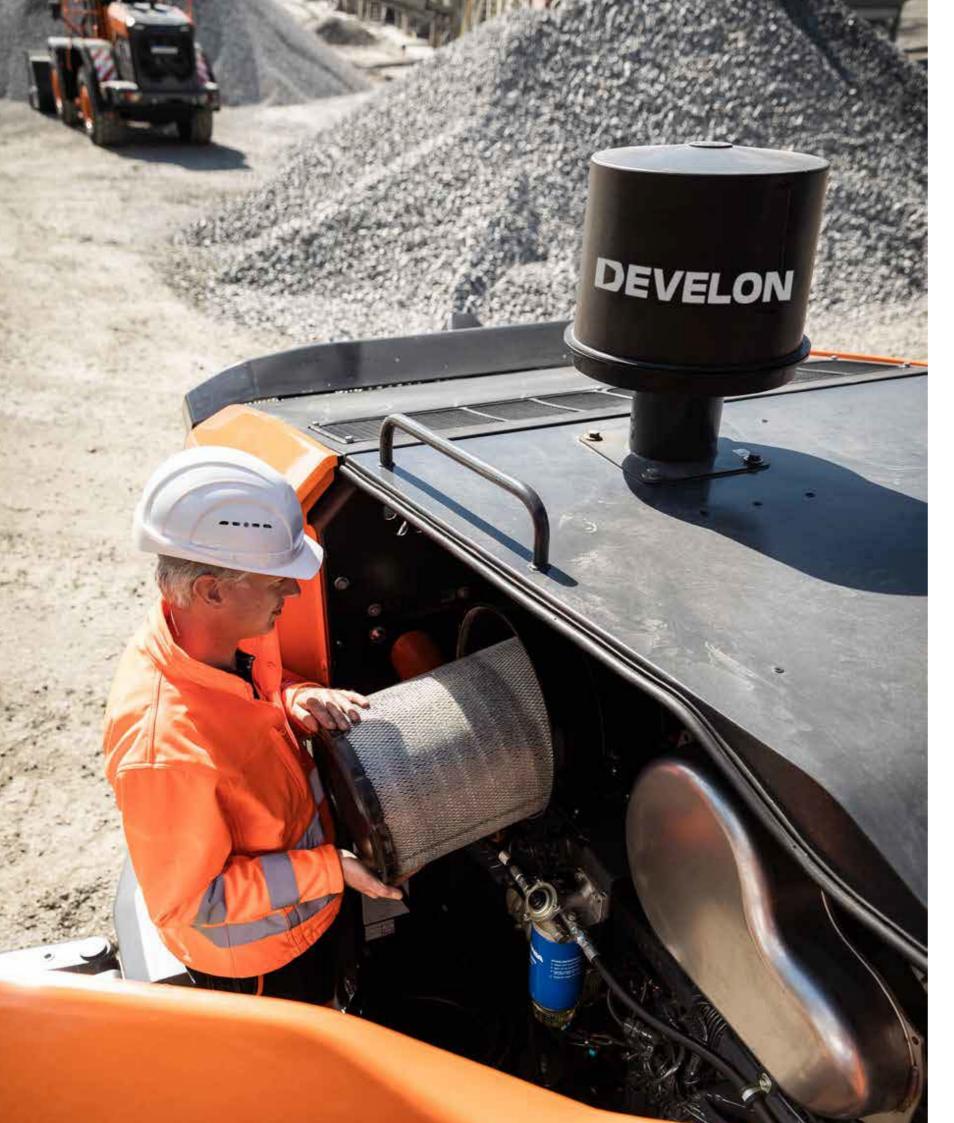
## TORQUE CONVERTER WITH LOCK-UP FUNCTION

The DL550-7 and DL580-7 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 2 nd 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.





# SIMPLE MAINTENANCE WITH MAXIMUM UPTIME

#### **COOLING PACKAGE**

One-block radiator 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 DL550-7 and DL580-7 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.

#### **FLEET MANAGEMENT**

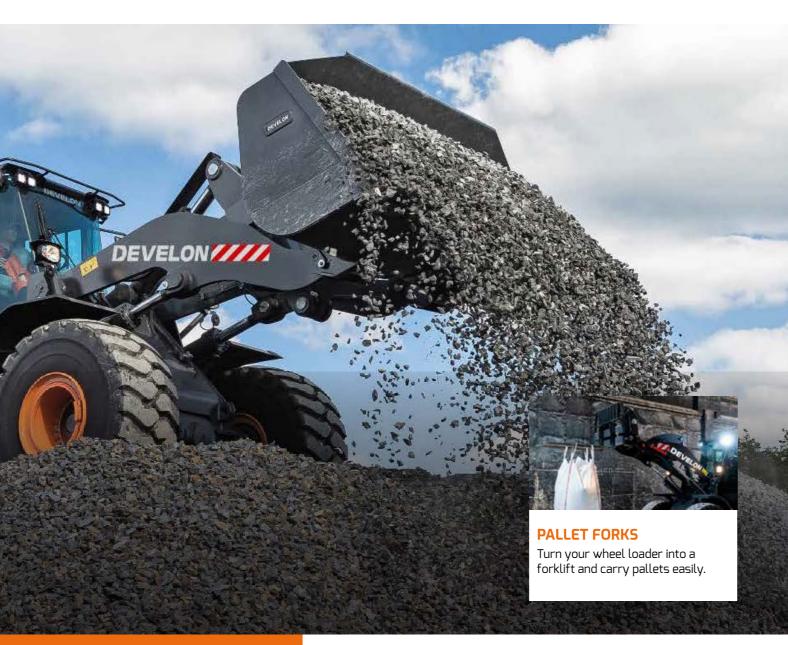
With DEVELON Fleet Management Web, you can proactively react to machine status, properly plan maintenance, and reduce downtime.

#### **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.



### **OPTIONAL ATTACHMENTS**



### PERFORMANCE GENERAL PURPOSE BUCKETS

#### **ON-DEMAND**

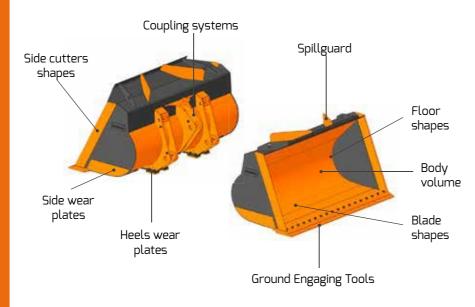
The on-demand, high quality bucket for your DEVELON wheel loader

#### **DRIVING COMFORT**

Driving comfort is increased thanks to the shock absorbers on the stoppers

#### **EXCELLENT RESISTANCE**

Excellent resistance to wear: 85% of the structure is made out of Hardox





#### **TELEMATICS TERMINAL**

Terminal device is installed and connected to a machine to capture machine data.

#### **TELECOMMUNICATION**

DEVELON provides dual-mode (Mobile, Satellite) communication to maximize communication coverage.

#### **DEVELON FLEET MANAGEMENT WEB**

Users can monitor machine status from DEVELON Fleet Management Web.

### **TECHNICAL SPECIFICATIONS**

#### **ENGINE**

	DL550-7	DL580-7	
Model	Scania	DC13	
No. of cylinders	€	5	
Max. power (SAE J1995)	283 kW / 380 hp @ 1800 rpm	294 kW/400 hp @ 1800 rpm	
Max. torque (SAE J1995)	2252 N·m @	) 1200 rpm	
Displacement	12700 cm <sup>3</sup>		
Bore × stroke	130 mm × 160 mm		
Starter	24 V /	6 kW	
Batteries - Alternator	2 × 12 V - 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.		

#### **AXLES**

	DL550-7	DL580-7		
Traction power	power 31.8 t 32.2 t			
HDL lock ratio	100% (front)			
Oscillation angle	+/- 12°			
Tire size - standard	29.5 R25			

#### **TRANSMISSION**

	DL550-7	DL580-7			
Туре	5-speed auto-powe	rshift with lock-up			
Torque converter	Single stage / mono phase / fixed wheel stator				
Speeds - forward 1/2/3/4/5	6.2 / 12.1 / 19.4 / 27.2 / 40	6.4 / 12.4 / 21.7 / 27.2 / 40			
Speeds - reverse 1/2/3	6.1 / 12.0 / 27.2	6 / 12.0 / 27.2			
Maximum traction	31.8 ton	32.2 ton			
Maximum gradeability	58% (30°)				

#### HYDRAULIC SYSTEM

	DL550-7	DL580-7	
Туре	Load sensing – closed center hydraulic system		
Main pump	Dual variable displacement axial pistons pumps		
Maximum flow	480 l/min	529 l/min	
Maximum pressure	250 bar		
EMCV	Automatic functions for positioning the bucket ready to dig and a function for stopping the lift arm at the desired heigh		
In the oil return to the tank, the filtration fiberglass filter has a filtering capability of 10 micron.			

#### **HYDRAULIC CYLINDERS**

C. H	0	Bore × rod diameter × stroke (mm)			
Cylinders	Quantity	DL550-7	DL580-7		
Lift	2	190 × 105 × 890	190 × 105 × 955		
Bucket	1	215 × 130 × 605	240 × 160 × 605		

#### LIFT ARM

Load cycle	DL550-7	DL580-7
Lift arm - up	6.5 s	6.4 s
Lift arm - down	3.7 s	3.8 s
Bucket - dump	1.4 s	1.5 s

#### **FLUID CAPACITIES**

	DL550-7	DL580-7	
Fuel tank	441L		
DEF (AdBlue®) tank	60	)l	
Cooling system (radiator) 54 l		4 l	
Engine oil	45 l		
Front axle	62.5 l		
Rear axle	64 l		
Hydraulic oil tank	242 l		
Transmission oil	67 l		

## 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)
- Engine management
- Fan reversible, variable speed, with automatic function

#### **POWERTRAIN**

- 5 Gear With Lock-up Clutch (standard for DL580-7)
- 4 Gear Without Lock-up Clutch (standard for DL550-7)
- Transmission mode managment
- I.C.C.O. (Intelligent Clutch Cut-Off)
- Axle differential Hydraulic Differential Lock
- Axles oil cooler

#### **HYDRAULIC**

- Load sensing hydraulic system, variable displacement pump
- 3 Spool Control Valve
- EMCV (Electric main control valve)

#### 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 (only for DL550-7)

#### **WORK TOOLS**

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(standard for DL580-7), 2-point safety belt(standard for DL550-7)
- DEVELON Smart Key
- DEVELON Smart Touch 8" touch screen, all-in-one
- DEVELON Smart Guidance System
- Side mirror
- DEVELON Fleet Management Web (telematic system)
- 12V socket
- USB socket
- Fingertip control
- O Rear-view mirrors heated, electric adjustment
- Joystick lever with FNR and thumbwheel roller integrated to the seat's right armrest
- Electric joystick steering on left armrest
- ODoor remote opening

#### **SAFETY**

- Safety belt alarm
- Rear-view camera

- Full handrails and maintenance platforms (standard for DL580-7)
- 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
- 29.5 R25 (L5)
- 29.5 R25 (L4)
- 29.5 R25 (L3)
- Additional counterweight
- DEVELON weighing system
- DEVELON Transparent Bucket
- O DEVELON Smart View
- DEVELON Smart Load

#### **LIST OF ATTACHMENTS\***

- Performance general purpose bucket, for direct mount, width 3.40 m
- $55.0 \text{ m}^3$  and  $5.4 \text{ m}^3$ , with teeth (DL550-7)
- 5.2 m<sup>3</sup>, bolt-on edge (DL550-7)
- 6.4 m³ and 7.3 m³, with teeth & segments (DL580-7)
- 6.4 m³ and 7.3 m³, with bolt-on edge (DL580-7)
- Quick coupler, LARGE
- Control kit for quick coupler
- Pallet forks attachment,
- 9t (FEM class 5), 1.5m, for LARGE quick coupler, width 1.5m
- Performance general purpose bucket,
- 5.7m<sup>3</sup>, for LARGE quick coupler, width 3.40m, bolt-on edge (DL550-7) 6.2 m<sup>3</sup>, for LARGE quick coupler, width 3.40m, bolt-on edge (DL580-7)

#### **BRAKES**

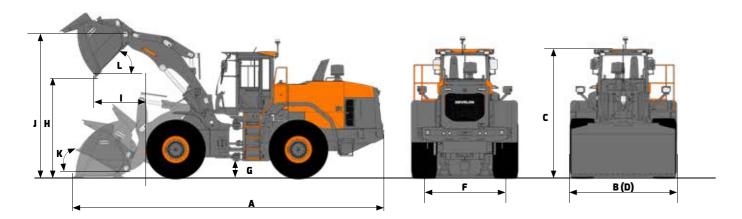
Dual multi-disc circuit with sintered metal discs for extended service life. Braking system activated by a pump and accumulator circuits. Spring-applied, hydraulically released parking brake is mounted on the transmission shaft and accumulator circuits and is electronically activated. Brake type: spring-applied / 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.

#### CAB

	DL550-7	DL580-7
Safety standards	ROPS ISO 3471:2008 FOPS ISO 3449	
Noise emissions	DL550-7	DL580-7
Operator Sound Pressure Level (ISO 6396)	72 dB	
Exterior Sound Power Level (ISO 6395)	109 dB	

\*Standard and optional equipments may differ per region.
Please contact your sales representative for more information.

## **WORKING RANG & DIMENSIONS**



#### DL550-7

Pin-on Ground engaging tools		Unit	Performance bucket			
			General purpose		Material handling	
			5.4 m³ TEETH	5.7 m³ BOCE	5.8 m³ TEETH	6.4 m³ BOCE
	Capacity heaped ISO/SAE	m³	5.4	5.7	5.8	6.4
В	Bucket width	mm	3405	3405	3424	3424
	Breakout force	kN	246	231	199	188
	Static tipping load (straight)	kg	25100	23809	22683	22692
	Static tipping load (full turn - 40°)	kg	22200	21024	20030	20038
Н	Dump height (at 45° - fully raised)	mm	3215	3375	3070	3165
1	Dump reach (at 45°- fully raised)	mm	1565	1425	1710	1630
	Digging depth	mm	111	100	111	100
J	Height at bucket pivot point	mm	4765	4765	4765	4765
	Max. tilt angle in carry position	۰	48	48	48	48
	Max. tilt angle fully raised	۰	66	66	66	66
К	Max. tilt angle on ground	۰	43	43	43	43
	Max. tilt angle at max. reach	۰	67	67	67	67
	Max. dump angle at max. reach	۰	68	68	68	68
	Max. dump angle on ground	۰	79	79	79	79
L	Max. dump angle fully raised	۰	46	46	46	46
	External radius - bucket edge	mm	7585	7520	7660	7620
F	Tread	mm	2420	2420	2420	2420
G	Ground clearance (at 12° osc.)	mm	359	359	359	359
Α	Overall length	mm	9895	9685	10100	9980
С	Overall height	mm	3845	3845	3845	3845
	Operating weight	kg	32020	32152	32606	32725



#### DL580-7

	Pin-on		Performance bucket			
			General purpose		Material handling	
Ground engaging tools			6.0 m³ TEETH	6.2 m³ BOCE	6.4 m³ TEETH	7.3 m³ BOCE
	Capacity heaped ISO/SAE	m³	6.0	6.2	6.4	7.3
В	Bucket width	mm	3405	3405	3424	3424
	Breakout force	kN	285	268	239	218
	Static tipping load (straight)	kg	27465	26560	25482	25273
	Static tipping load (full turn - 40°)	kg	24250	23453	22502	22317
Н	Dump height (at 45° - fully raised)	mm	3140	3300	3030	3070
I	Dump reach (at 45°- fully raised)	mm	1515	1385	1770	1725
	Digging depth	mm	100	85	100	85
J	Height at bucket pivot point	mm	4780	4780	4780	4780
	Max. tilt angle in carry position	۰	48	48	48	48
	Max. tilt angle fully raised	•	66	66	66	66
К	Max. tilt angle on ground	۰	43	43	43	43
	Max. tilt angle at max. reach	۰	67	67	67	67
	Max. dump angle at max. reach	•	68	68	68	68
	Max. dump angle on ground	•	79	79	79	79
L	Max. dump angle fully raised	•	46	46	46	46
	External radius - bucket edge	mm	7620	7550	7675	7655
F	Tread	mm	2420	2420	2420	2420
G	Ground clearance (at 12° osc.)	mm	359	359	359	359
Α	Overall length	mm	10050	9840	10225	10160
С	Overall height	mm	3845	3845	3845	3845
	Operating weight	kg	34130	33890	34372	34591







We trace our roots to 1937 as one of Korea's first large scale machine plant. Throughout time we have consistently delivered exceptional products and solutions.

DEVELON is a bold name that reflects our core ambition to continue developing onwards and leaving behind a positive footprint in our world. Moving forward, we seek to be part of our customers and partners' endeavor to build a better world.

## Powered by **Innovation**



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