

Tunneling excavator

DX235RTF-7

Maximum power	189 hp
Operating weight	25.7 t
Main pumps max flow	2 × 222.3 l/min



DEVELON

DEVELON

Continuous evolution, for better.

We trace our roots to 1937 as one of Korea's first large-scale machine plants. During that time, we have consistently delivered earth-moving equipment to build critical infrastructure for the betterment of communities, societies and the wider world.

**We are
Develon.**

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 will continue providing innovative products and solutions that advance the world we live in today.



Conquer any tunnel, perform in every inch

Develon tunneling excavator is designed to tackle the rigorous demands of subterranean construction.

At the forefront of its design is the tunneling front, comprising a robust arm and boom, engineered for precision and strength. The boom, equipped with a powerful tilting function, allows for versatile movements and accurate positioning of the arm, which is pivotal for the excavation process in the challenging environment of tunnel interiors.

The upper structure construction of Develon DX235RTF-7 allows reduced swing radius. This feature is particularly beneficial in the confined spaces of a tunnel, where every inch of maneuverability counts. The reduced swing radius ensures that the excavator can operate within the tight constraints of the tunnel without compromising on the efficiency of the excavation process and safety.

Equipped with the latest generation Develon engine that deliver substantial power, these machines are built to tackle the toughest of tasks. Choice of 4 power modes allows to optimize performance for task on hand while significantly reducing fuel consumption and emissions.



Flexible and reliable tunneling front

At Develon, we understand the demanding conditions of subterranean work and the importance of safety, durability, and precision. Develon tunneling excavator is designed to tackle the rigorous demands of subterranean construction.

Tilting boom

At its core is the tilting boom, a pivotal feature that allows for precise positioning and maneuverability in confined spaces. This boom, robust in construction, is complemented by a strong tunneling arm that boasts sophisticated kinematics needed for efficient use of specialised tunneling attachment. The front's design enables the DX235RTF-7 to exert considerable force for breaking through tough substrates while maintaining the delicate touch needed for finer operations.

Heavy duty design

To ensure the longevity and reliability, guard covers are strategically placed to shield vital components from falling debris. These covers are not only robust but also designed to be removable for maintenance, ensuring minimal downtime and maximum productivity. The piping installation, a critical aspect of the tunneling front, is meticulously engineered to withstand the harsh underground environment. Specialized protective measures, such as reinforced coverings and strategic placement away from potential impact zones, are implemented to safeguard against damage from falling material.



Engineered for excellence, built to last



Easy way through, unbeatable safety

Maximum safety

A variety of safety features

FOGS protects the operator from falling objects. Anti-slip steps and platforms, as well as guard rails on upper structure. A 360° all-around view camera (AVM) for maximum safety while working with people around. Large side mirrors, travel alarm.

Protective equipment

Heavy duty covers are used to provide a robust barrier against potential sources of damage, such as falling debris and protruding objects. Hydraulic piping is located on sides of the boom and arm to eliminate the risk of damage.

Cylinder installed under arm

Operation in areas with limited height requires special attention to the machine construction. Arm cylinder is located under the arm to allow low working height in the tunnels as well as protection of the component itself.

Short swing radius

A significant advantage in regular working environment, a necessity in tunneling application. Compact layout of upper structure not only enhances the safety of the operation but also improves efficiency as it allows for greater maneuverability and precision.



Smooth operation, supreme comfort

Outstanding cabin comfort

Best-in-class operator environment

The DX235RTF-7 is designed to provide you with the best possible working conditions. The sophisticated state-of-the-art ROPS cab is pressurized and ISO-certified for your safety. A high-quality heated seat with air suspension provides maximum operator comfort.

Unrivalled comfort

Comfortably seated, you benefit from a clear all-round view of the work site and have easy access to several storage compartments. Pedals, joysticks and armrests have all been designed for operator comfort and efficiency. Noise and vibration levels are remarkably low, and the effectiveness of the air conditioning and automatic climate control has been increased significantly. These features allow you to continue working for hours on end without feeling tired. Finally, thanks to the hands-free system, you won't miss any important call, and you'll stay available to your customers, as you operate the machine.

Cab suspension

The cab's suspension system (CabSus mount) dampens vibrations and provides outstanding protection against impact. This system absorbs shocks and vibrations much more effectively than a conventional silentblock suspension system.

Develon smart touch

The wide 8" touchscreen provides easy scrolling through the different menus, including power settings and auxiliary hydraulics settings. It also allows you to connect a Bluetooth device or listen to your favorite radio station.

360° All-around view camera (AVM) system

The 360° all-around view camera (AVM) system gives you full view of the machine's surroundings.



Simple maintenance for maximum uptime

By making routine checks straightforward and accessible, Develon helps operators keep their equipment running smoothly and efficiently, minimizing downtime and operational costs. With simplified maintenance procedures, operators can quickly perform necessary tasks, preventing unexpected breakdowns, ensuring machines remain in optimal condition and operate reliably over the long term.

Keep it running, keep it simple

Maintenance access made simple

- Large guard rails are installed along with anti-slip steps and plates, for safer, easier access to the whole upper structure.
- The air conditioning filter is placed on the side of the cab for easy access. The filter's cover can be locked and opened with a key.
- A battery cut-off switch makes it easy to disconnect the battery for long-term storage.
- The hour meter display can be easily checked from ground level.
- Shut-off valves have been fitted on the pre-filter piping line and fuel tank drain piping to make servicing easier and prevent pollution from leakage.
- Engine parts can be easily reached via the top and side panels.
- For extra accessibility and servicing convenience, all filters (engine oil filter, fuel pre-filters, fuel filters and pilot filter) are located in the pump compartment.
- An electric transfer pump for initial priming of fuel filters is featured as standard.
- Fine mesh on the side doors and on the cooler itself filters the intake air going to the cooler for better cooling performance and reduced maintenance.

Adblue® tank

Connected to the ECU, sensors in the tank detect low levels of AdBlue® or any other system malfunction. Also equipped with an AdBlue® level indicator during refilling (LED light), to avoid over filling.

Centralized greasing points

To make maintenance easier, the greasing points have been centralized. An automatic lubrication system is available as an option.



Top performance and fuel efficiency

Exceptionally powerful, yet environmentally friendly, Develon demolition excavators feature extraordinary fuel efficiency.

High performance, maximum fuel efficiency

The power to raise productivity

- The DX235RTF-7 is equipped with the latest generation Develon engine
- Stage V compliant, this engine boasts extremely low emissions because reducing our environmental impact is paramount to us
- Exhaust gases are purified by Selective Catalytic Reduction

Efficient fuel management

- Choice of 4 power modes (Eco – Standard – Power – Power Plus) and automatic Smart Power Control system for optimal power and reduced fuel consumption in all conditions
- Engine auto-shut-off: shuts down the engine after the machine has been idling for a specified time. The operator can set the delay before shut-off via the Develon Smart Touch screen

Variable pressure turbocharger

Provides optimal air flow to the engine combustion chamber under all speed and load conditions, so that exhaust gas is cleaner and fuel economy is improved.

SPC3 (smart power control)

2 systems (Variable Speed Control and Pump Torque Control) work together to improve efficiency while maintaining productivity. The system reduces the engine speed and adjusts the pump torque according to work conditions.



Develon Fleet Management } Management
 on the job site } Work efficiency management
 } Preventive management } Proactive service

Monitor your equipment from anywhere

To compete and succeed, your equipment needs to maximize job site productivity and the bottom line. Develon machines do both. To ensure a high return on investment, we add more premium features as standard equipment on every model. Our standard features are often options that other manufacturers only provide at extra cost. By including them as standard, Develon gives you a competitive edge – helping operators work more efficiently and improving safety during long days on the field.

- > **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.



Operation trend	Total operation hours and operation hours by mode.
Fuel efficiency*	Fuel level and fuel consumption.
Reports & Location	Operation report & utilization. GSP and geo-fence.
Warning & Alert	Detect machine warnings, antenna disconnection, and geo/time fence.
Filter & Oil management	Preventive maintenance by item replacement cycle.

*Functions may not be applied to all models. Please, contact your sales representative for more information on this feature.



Attachments

Selecting the right attachment for a tunneling excavator is crucial for maximum performance and efficiency,

Ripper buckets

Special bucket designed for maximum force concentrated on teeth for material extraction.

Digging buckets

Selection of Develon digging buckets for excavation in harsh environment.

Hydraulic breakers

Essential for efficiently breaking through rock, facilitating faster and more precise excavation.

Quick couplers

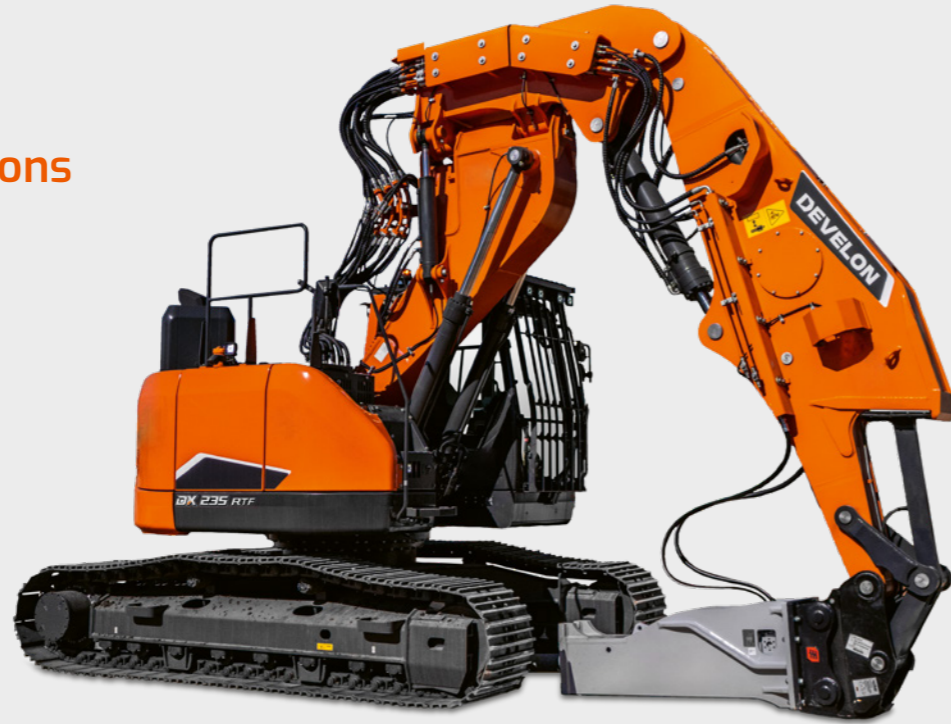
Quick couplers enhance operational flexibility and productivity by allowing operators to switch between attachments quickly and safely.



DEVELON

Technical specifications

DX235RTF-7



Engine

Designed to deliver superior performance and fuel efficiency, the Develon DL06V diesel engine fully meets the latest Stage V emission regulations. To optimize machine performance, the engine uses high-pressure fuel injectors, air-to-air inter-cooler and electronic engine controls. 4-Cycle Water-Cooled, Wastegate Turbocharged, Diesel Oxidation Catalyst (DOC) & Selective Catalytic Reduction (SCR) and Diesel Particulate Filter (DPF).

Model	Develon DL06V
No. of cylinders	6
Rated power at 1 900 rpm	SAE J1995: 141 kW (189 hp) SAE J1349: 127 kW (170 hp)
Max. torque at 1 400 rpm	82 kgf-m
Idle (low – high)	800 [±10] - 2000 [±25] rpm
Displacement	5 890 cm ³
Bore × stroke	100 mm × 125 mm
Starter	24 V / 6 kW
Batteries – Alternator	2 × 12 V, 100 Ah – 24 V, 100 A
Air filter	Double element air cleaner

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

Upper rollers (standard shoe)	2
Lower rollers	8
Number of links & shoes per side	49
Link pitch	190 mm

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

Maximum swing speed	11.5 rpm
Maximum swing torque	9 626 kgf-m

Hydraulic system

The e-EPOS (Electronic Power Optimising System) is the brain of the excavator – minimising fuel consumption and optimizing the efficiency of the hydraulic system for all working conditions. To harmonize 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

Main pump	
1 × variable displacement tandem axial piston pump	
Maximum flow at 1 900 rpm	2 × 222.3 l/min
Pilot pump – Gear pump	
Maximum flow at 1 900 rpm	26 l/min
Relief valve settings	
Implement	350 / 370 kgf/cm ²
Travel	350 / 365 kgf/cm ²
Swing	300 kgf/cm ²
Pilot	40 kgf/cm ²

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.

Travel speed (low – high)	3.2 – 5.8 km/h
Maximum traction	29.2 t
Maximum gradeability	35° / 70%

Cab

The air-conditioning and heating systems are integrated for optimal climate control. An automatically-controlled fan supplies the pressurized 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.

A-weighted emission sound pressure level at the operator's position, LpAd (ISO 6396:2008)

Declared	72 dB(A)
Measured	71 dB(A)

A-weighted sound power level, LwAd (2000/14/EC)

Declared	103 dB(A)
Measured	102 dB(A)

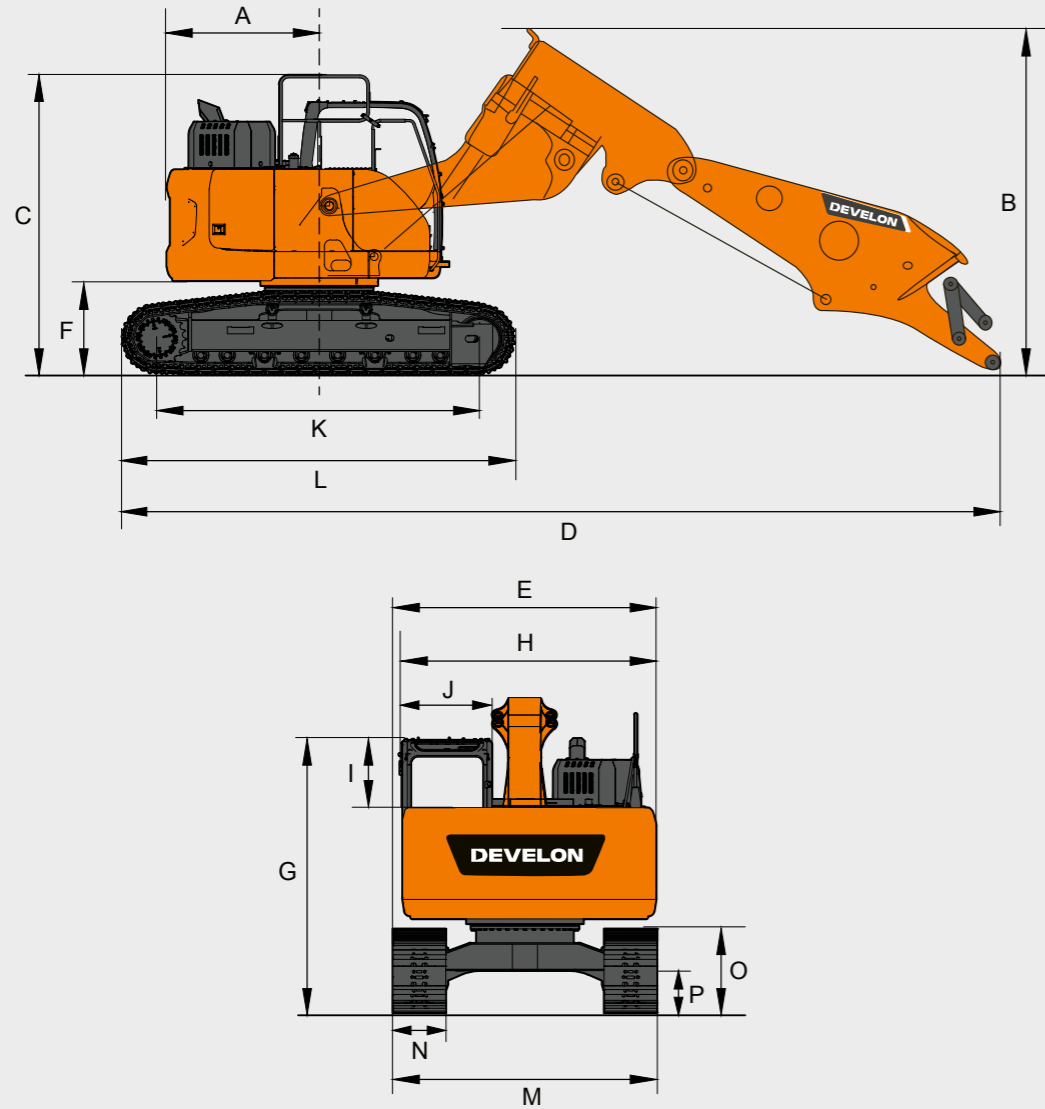
Fluid capacities

Fuel tank	310 l
Cooling system (radiator)	30.7 l
AdBlue® (DEF) tank	31.5 l
Hydraulic oil tank	190 l
Engine oil	27 l
Swing drive	5 l
Travel device	2 × 4 l

Component weights

Item	Unit	Weight	Remarks
Base machine	kg	20 800	With boom cylinder incl. counterweight
Counterweight	kg	6 450	
Front assembly	kg	4 540	
Pipine & covers	kg	1 069	incl. arm bucket and tilt cylinders
Total weight	kg	25 689	

Dimensions



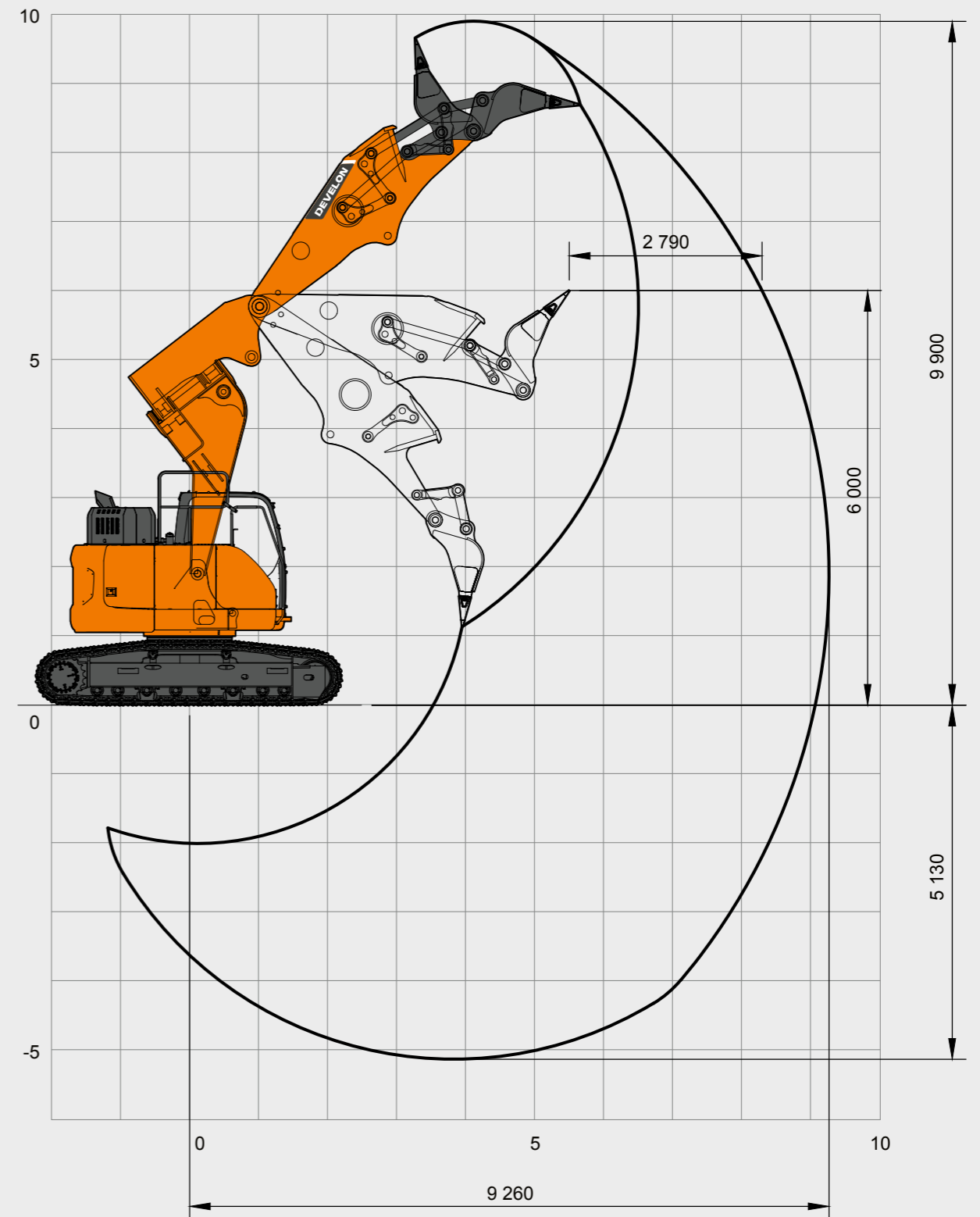
Classification

Dimensions (mm)

		Dimensions (mm)
A	Tail swing radius	1724
B	Shipping height (boom)	3840
C	Overall height (guard rail)	3390
D	Shipping length	9750
E	Shipping width	2990
F	Counterweight clearance*	1092
G	Height over cab	3080
H	House width	2870
I	Cab height above house	680
J	Cab width	1022
K	Tumbler distance	3650
L	Track length	4446
M	Undercarriage width	2990
N	Shoe width	600
O	Track height*	883
P	Ground clearance*	451

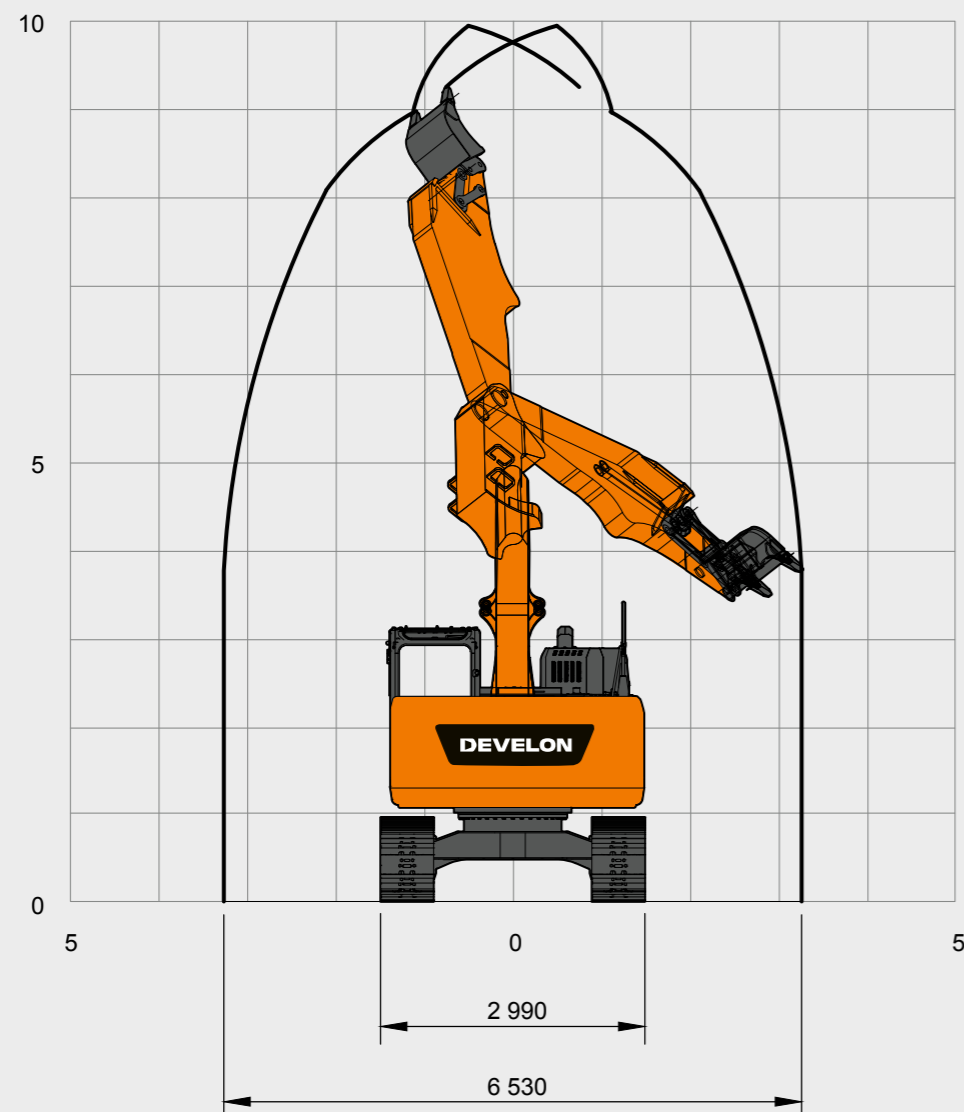
Working range

Tunneling front



Working range

Boom tilting



Standard & Optional equipment

Standard

Develon DL06V, Stage V compliant, SCR, DOC and DPF post treatment, water-cooled diesel engine with Wastegate, turbocharger and air-to-air intercooler

Auto-idle function

Auto shut-off

No EGR

Boom and arm flow regeneration

Fine swing mode, on or off from cab

Swing anti-rebound valves

1-touch power boost function

Double way line high flow + Breaker piping (PE3C)

Hydraulic piping low flow for rotating or tilting tool (joystick control)

Hydraulic piping for quick-coupler

Smart Power Control (SPC)

Cylinder cushioning & contamination seals

Pressurized sound-insulated and CabSuspended cab

Fully adjustable heated air suspension seat

Air conditioning with climate control

Pull-up type front window sun roller blind and removable lower front window

Sliding left window

Intermittent upper and lower windshield parallel wiper

Rear window defroster switch

Adjustable PPC wrist control levers for arm boom bucket and swing

Joysticks & pedal provide proportional control of auxiliary hydraulic lines

Pedal for auxiliary control 1 & 2 ways

Jog shuttle switch

DEVELON Smart Touch – 8" touch screen, all-in-one

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.)

Heating and cooling lunch box

Flat spacious easy-to-clean floor

Keyless start (Develon Smart Key) & remote door lock / unlock

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

Radio + MP3 (stereo) with Bluetooth streaming and handsfree call system

360° all-around view camera (AVM)

Falling Objects Guard System – top and front cab guards (ISO 10262 level II)

Roll Over Protective Structure (ROPS)

Boom and arm cylinder safety valves

Overload warning device

Large guard rails on upper structure and steps

Rotating beacon

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

Emergency engine stop switch and hydraulic pump control switch

Parking brake

LED 8 work lights (2 boom lamp, 4 body lamps, 2 additional lamps on cab)

6 450 kg counterweight

Tilting heavy duty boom

Tunneling arm with specific bucket kinematics

Develon Fleet Management Web (telematic system)

Auto shut-off fuel filler pump

Double element air cleaner and pre-filtered Turbo dust separator

Fuel pre-filter with water separator sensor

Dust screen for radiator/oil cooler

Self-diagnostic function

Alternator (24 V 100 A) – Battery (2 × 12 V 150 Ah)

Hydrostatic drive with 2-speed power shift transmission

Remote greasing for swing circle and work group pivot points

Standard fixed undercarriage 2 990 mm

600 mm triple grouser shoes

Optional

Dozer blade



Develon Warranty

Your key to equipment protection and peace on mind

Unlock unparalleled protection for your heavy construction equipment with Develon. Our robust warranties and premium protection plans ensure your investment is safeguarded and adds lasting value.

Tailored warranty plans

Choose from a range of affordable protection plans, designed exclusively for Develon customers through our authorized dealers. These plans turn your machine's price into a strategic investment, not just an expense.

Develon Premium: Premium protection

Opt for Develon Premium to experience unmatched security, reliability, and overall value. This top-tier plan shields your equipment from unexpected costs and minimizes downtime, letting you focus on what matters – getting the job done*.

Act now!

Contact our authorized Develon Dealers today and fortify your equipment investment. With a seamless process and lasting benefits, Develon ensures your heavy construction equipment remains in peak condition.

**Choose Develon Extended Warranty:
Play safe and secure your investments.**

* Only for ADT, HEX and WLO.
Offer may vary based on model.

Powered by Innovation

DEVELON

Space for dealer's stamp



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