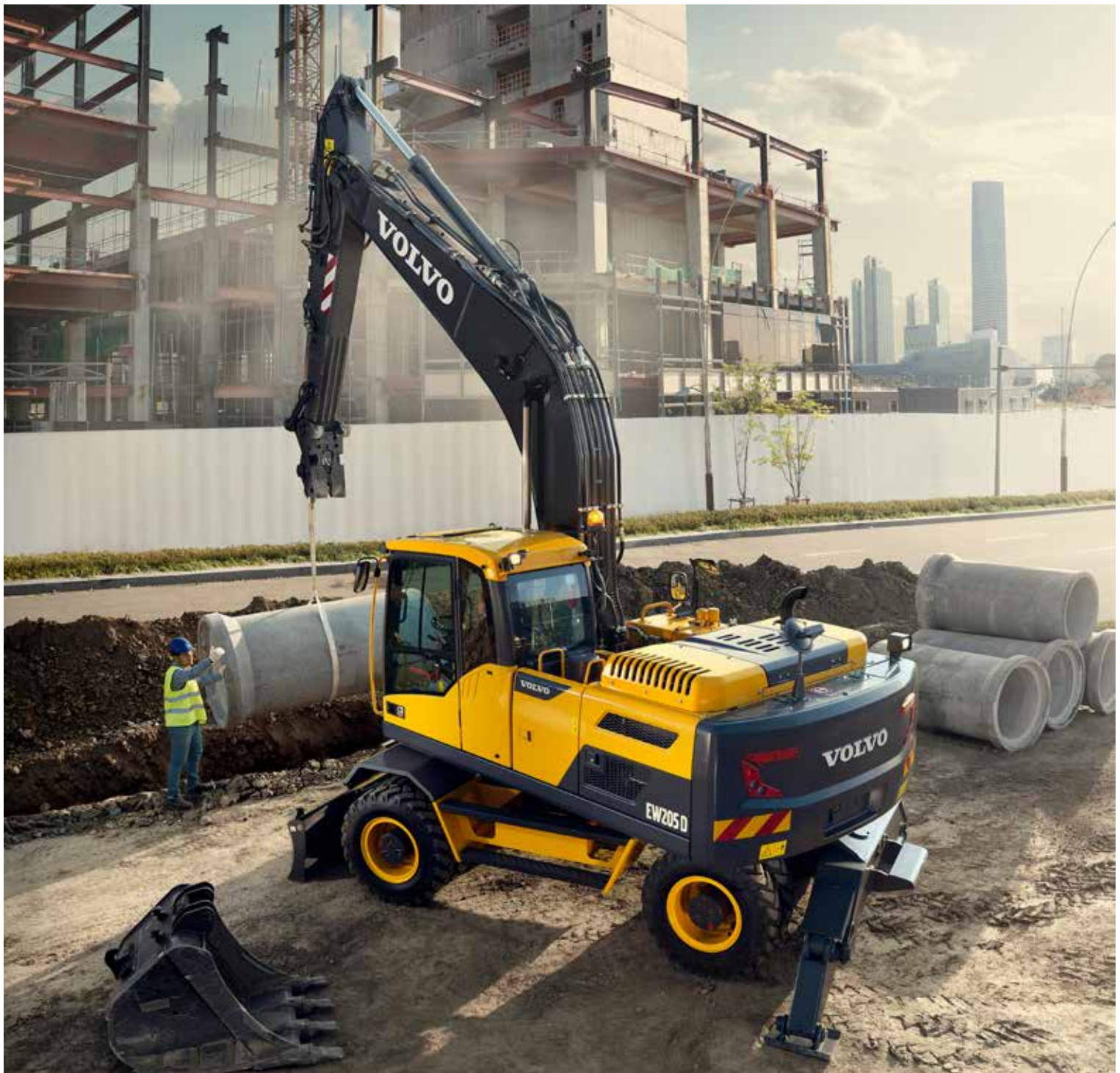


Volvo Construction Equipment  
Building Tomorrow



# EW205D

Volvo Excavators 19.8-21.8 t 176 hp







# ECO MODE

Volvo's unique ECO mode optimizes the hydraulic system to reduce flow and pressure losses – resulting in improved fuel efficiency without any loss of performance in most operating conditions. ECO mode is automatically selected but can be switched off via the keypad.

# Unrivalled fuel efficiency

Introducing the EW205D from Volvo – a new 20 ton wheeled excavator designed to drive your efficiency up. With advanced technology including Volvo's unique ECO mode and a powerful Volvo engine, this superior digging and mobile tool carrying machine works with ultimate efficiency both off and on-road.

## Volvo engine

Featuring proven, advanced technology and built on decades of experience, the Volvo D6 engine delivers the ultimate combination of low fuel consumption and high productivity. Benefit from superior performance, reliability and durability.



## Automatic idling system

Engine speed is reduced to idle when the controls are inactive for a pre-set amount of time (between 3 and 20 seconds). This reduces fuel consumption and noise.

## Optimized piping

The large diameter of the hydraulic piping on the boom and arm reduces pressure losses and improves fuel efficiency.

## Work modes

Volvo's unique, integrated work mode system optimizes fuel efficiency and machine performance. The operator can choose the best work mode for the task at hand – select from I (Idle), F (Fine), G (General), H (Heavy) and P (Power max).



## Auto engine shut down

To reduce fuel consumption, the engine will automatically switch off when the machine is inactive for a pre-set amount of time (five minutes is the default setting).



# Command and control

If you're looking for superior controllability and smooth and responsive movements then look no further than the EW205D. Featuring advanced hydraulics and an electronic flow-dividing control system, this excavator delivers an outstanding performance in both single and combined operations.

## Electronic flow-dividing control system

The Proportional Pressure Reducing Valve (PPRV) ensures the right amount of flow is delivered to each operation. This results in optimized control – delivering smooth and responsive movements during combined operations.



## Main control valve

The newly developed main control valve is designed to reduce internal pressure losses and enhance the efficiency of the hydraulic system.

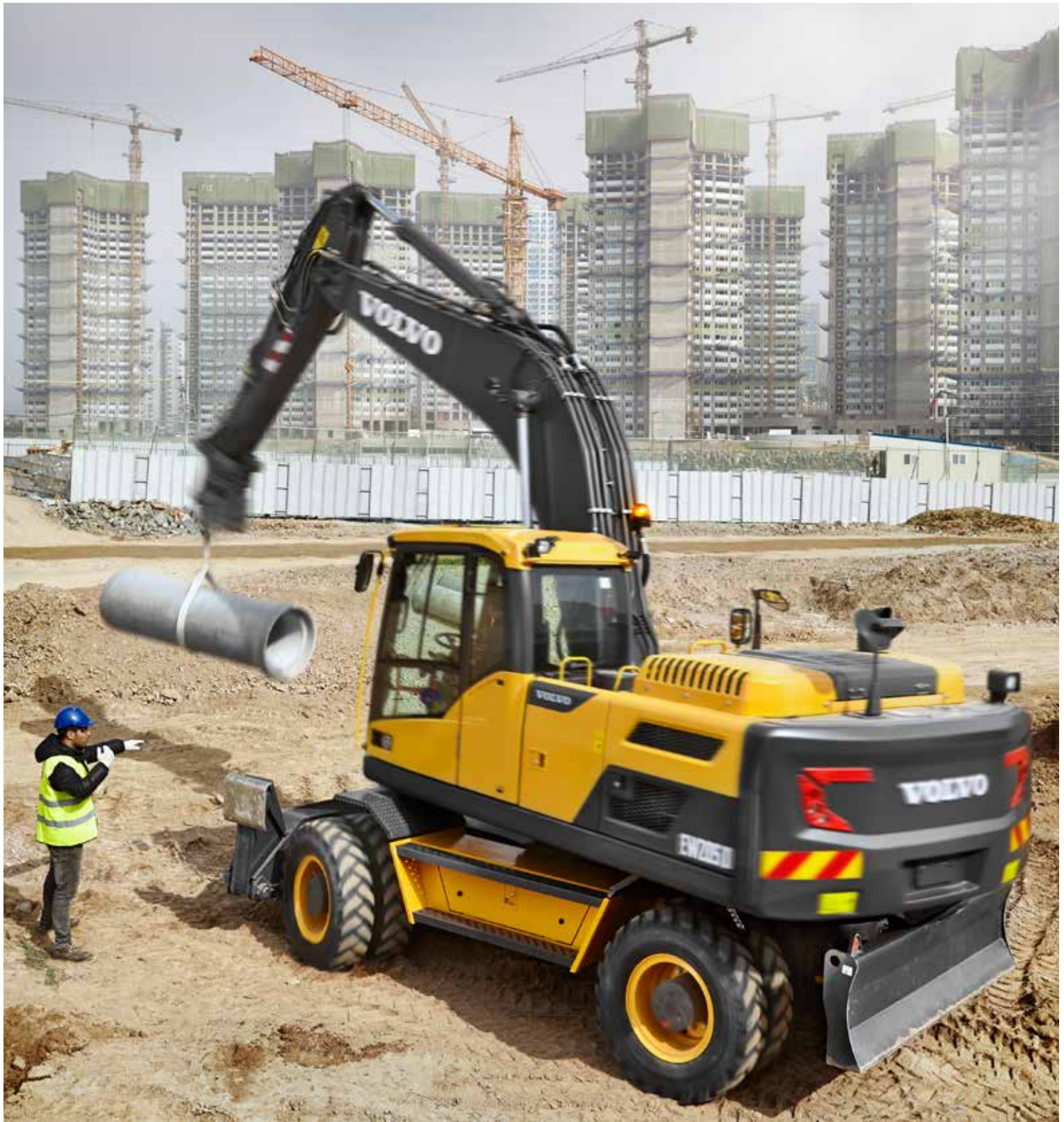


## Breaker and shear pedal

The electronically-controlled breaker and shear foot pedal delivers superior control and ease of operation.







# ADVANCED HYDRAULICS

The full electro-hydraulic system and main control valve use intelligent technology to control on-demand flow and reduce internal losses in the hydraulic circuit. This provides increased control, shorter cycle times and improved fuel efficiency.





# STABLE UNDERCARRIAGE

The well-balanced undercarriage is made from strong steel for maximum durability when operating in rough terrain as well as ultimate stability when lifting heavy loads.

# Stability you can rely on

Whether you're working in the road construction, utilities, landscaping or any other application, the EW205D has been built to handle tough terrain and work on a variety of jobsites. With a strong undercarriage and a rigid main frame, this well-balanced and durable excavator boasts superior stability.

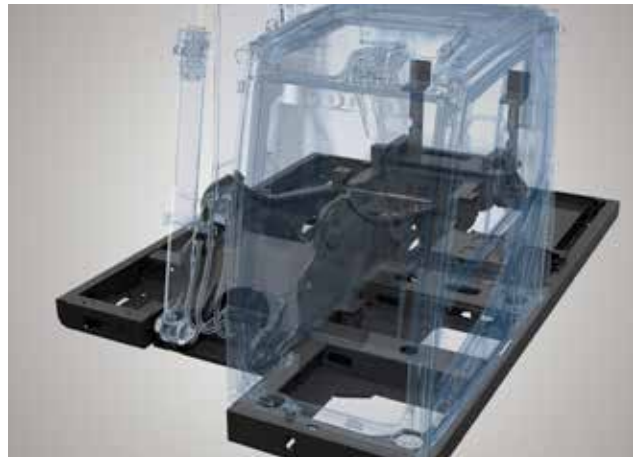
## Axle lock

For superior ground contact when traveling and operating on a slope or uneven terrain, the front axle oscillates. To keep the machine level and secure stability, the axle lock function can be both manually and automatically activated.



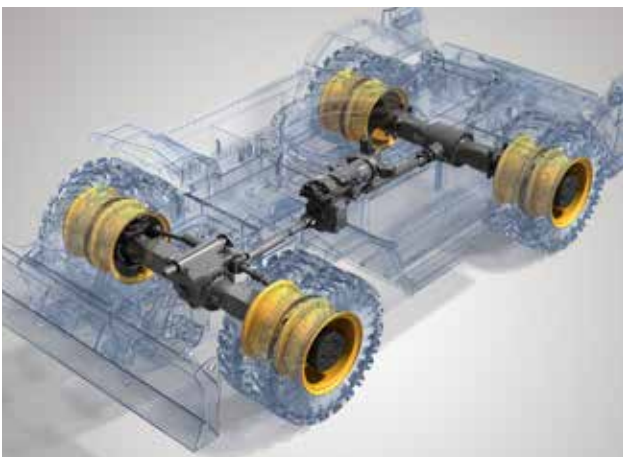
## Rigid main frame

The strong structure easily absorbs impacts transferred through the digging equipment. Reinforced welding between the center and side frames, and the boom and boom cylinder mounts, increases durability.



## Well-balanced driveline

The ideally-matched, Volvo driveline has been built to work in perfect harmony. The durable Volvo design delivers excellent control for smooth travel, superior performance and high productivity.



## Dozer blade and outriggers

A robust dozer blade and outriggers optimize machine stability and increase versatility – enabling the excavator to carry out a variety of tasks including lifting, loading and grading.





# Comfort counts

When you have a long day ahead of you it's important to know you'll be working in comfort. That's why Volvo has developed a spacious and comfortable operating environment with ergonomic controls, all-around visibility and vibration protection. Experience new levels of comfort and get the job done with Volvo.

## I-ECU monitor

The color, seven inch LCD monitor displays machine status information including fuel consumption data and service interval alerts – enabling increased uptime and high productivity. The user-friendly design is easy to read in all light conditions.



## Volvo seat

The fully adjustable seat has been designed to enhance operator comfort during long work shifts. An optional air suspension and heated seat are available for ultimate comfort.



## Adjustable steering column

The slim design of the easily adjustable steering column enables easy entry to the cab while also ensuring visibility is not impaired. The angle of the steering column is changed by simply pushing a pedal.

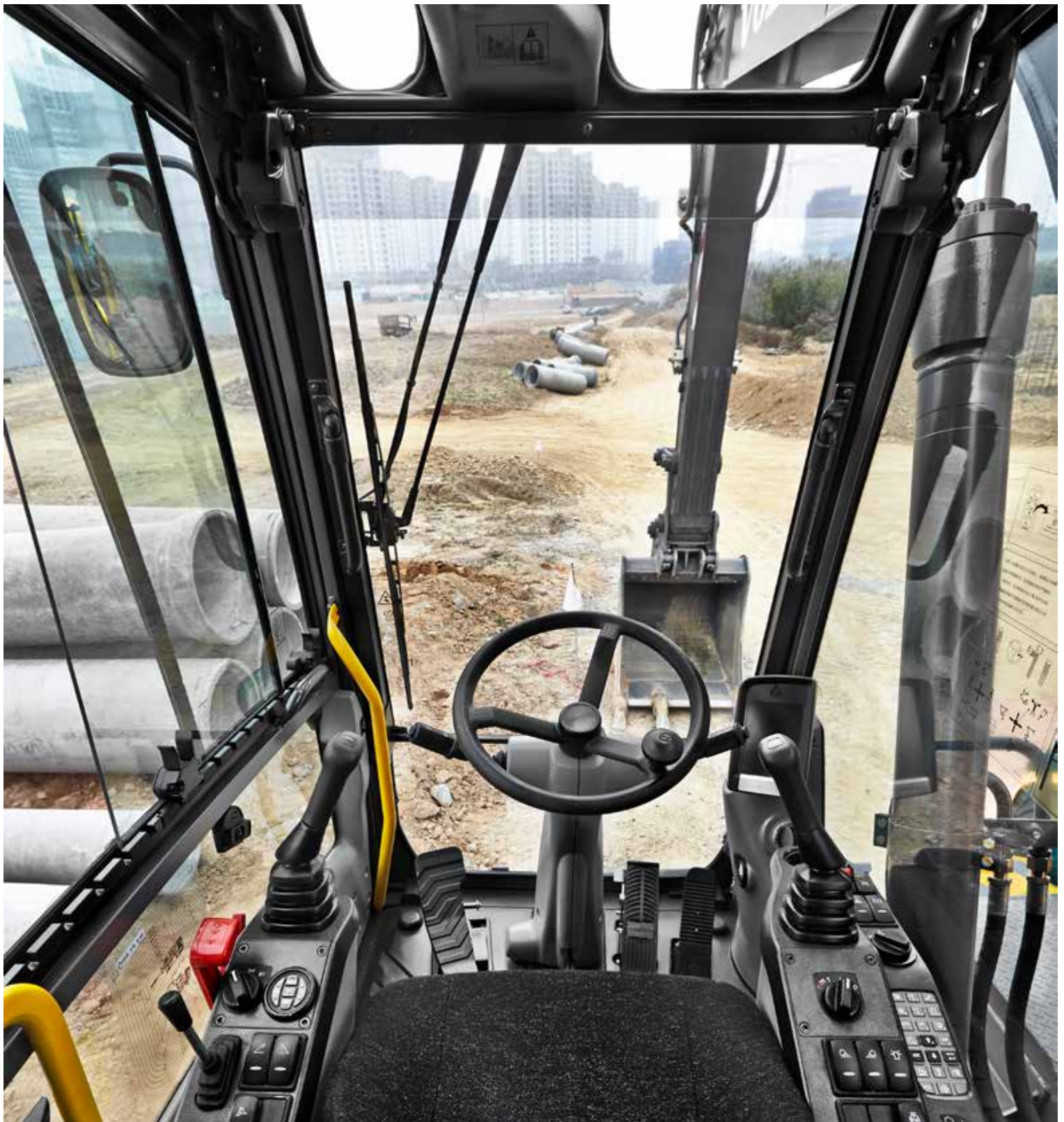


## Climate control

Volvo's powerful, industry-leading climate control system provides superior operator comfort. The air circulation and defrosting system features 14 well-spaced vents which quickly heat or cool the cab.







# VOLVO CAB

With slim cab pillars and large expanses of glass, the Volvo ROPS cab offers all-around visibility and ultimate safety both on and off-road. For increased operator comfort, controls and switches are ideally placed while rubber cab mounts improve shock absorption and reduce vibration.





# EASY SERVICE ACCESS

Rear access behind the cab, along with sturdy steps and handrails, provides safe and easy maintenance access to the superstructure. Centralized greasing points permit regular checks to be done faster for maximum machine uptime.



# Access more uptime

Even a Volvo machine requires service and maintenance in order to work as efficiently and productively as possible. But the difference is that Volvo makes maintenance easy – giving you more uptime. With grouped service points and safe and easy access to components, you'll get the most out of each working day.

## Large toolbox

For easy daily maintenance and increased uptime, a spacious toolbox is located between the steps on the left side of the machine.



## Single layer cooling system

The radiator, charged air cooler and hydraulic oil cooler are integrated in a single layer to maximize efficiency, reduce blockages and aid cleaning. The system is easily accessed by opening the side door.



## Service interval display

For easy maintenance and increased machine uptime, four service interval alerts on the monitor inform the operator when maintenance is required.



## Grouped filters

Grouped filters are quick and easy to access from ground level for fast servicing.



# The machine that does more

## Electronic flow-dividing control system

The Proportional Pressure Reducing Valve (PPRV) ensures the right amount of flow is delivered to each operation.

## Serviceability

Grouped filters and centralized greasing points permit regular checks to be done faster for maximum machine uptime.

## ADVANCED HYDRAULICS

The full electro-hydraulic system and main control valve use intelligent technology to control on-demand flow for high performance and efficiency.

## Quick couplers

Volvo quick couplers are designed to work with Volvo attachments, delivering ultimate compatibility and unrivalled performance.

## ATTACHMENT RANGE

Volvo's comprehensive range of attachments have been purpose-built to work in perfect harmony with Volvo machines.

## Dozer blade and outriggers

A robust dozer blade and outriggers optimize machine stability and increase versatility.





### I-ECU monitor

The LCD monitor clearly displays machine status information for easy operation and increased productivity.

### VOLVO CAB

All-around visibility and an ergonomic design are at the center of Volvo's operator environment – increasing comfort and ease of operation.

### EASY SERVICE ACCESS

Rear access behind the cab along with sturdy steps and handrails provide safe and easy maintenance access to the superstructure.

### Volvo engine

The Volvo D6 engine delivers the ultimate combination of low fuel consumption and high productivity.

### Rigid main frame

The strong structure easily absorbs impacts transferred through the digging equipment.

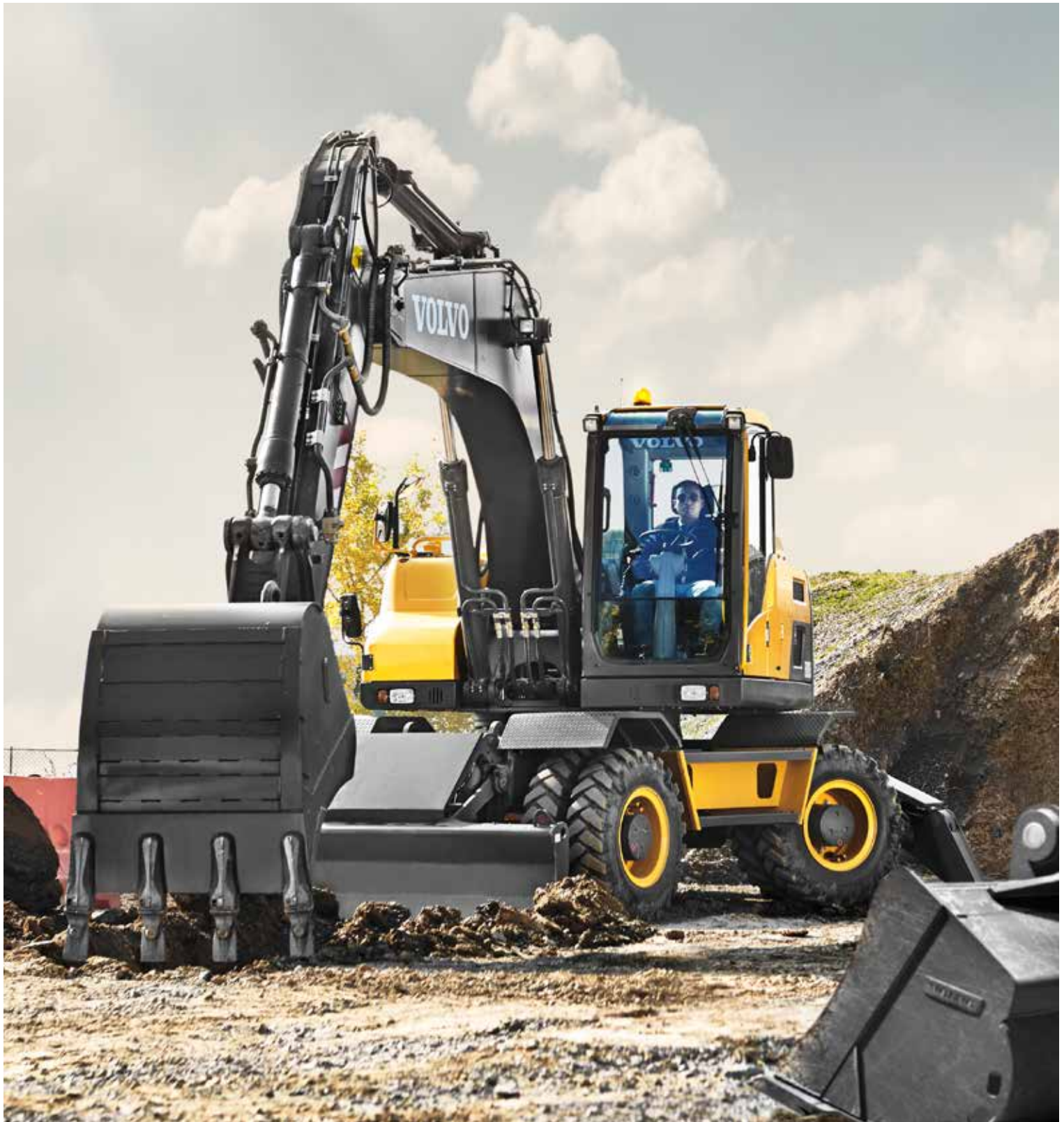
### ECO MODE

Volvo's unique ECO mode improves fuel efficiency without any loss of performance in most operating conditions.

### STABLE UNDERCARRIAGE

The well-balanced undercarriage is made from strong steel for maximum durability and stability.





# ATTACHMENT RANGE

Volvo's durable attachments have been purposebuilt to work in perfect harmony with Volvo machines, forming one solid, reliable unit. The comprehensive range includes ditching buckets, hydraulic breakers and general purpose buckets. Experience maximum productivity with the right attachment for your specific requirements.

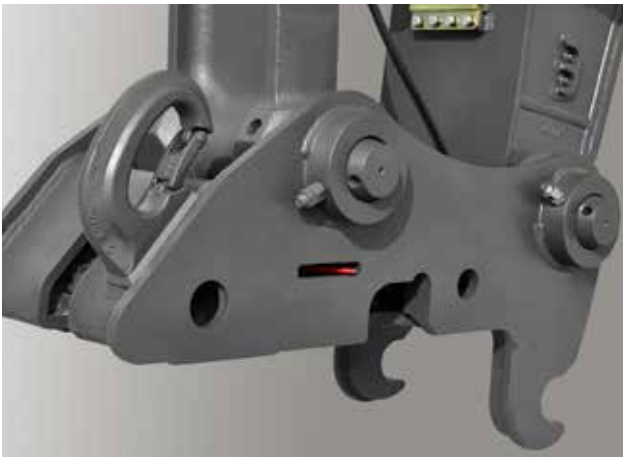


# Infinite opportunities

Maximize your productivity and profitability with the versatile EW205D and Volvo's comprehensive, durable range of attachments. Increase your versatility, access more applications and effectively perform a variety of tasks – all while experiencing faster cycle times and excellent control. Get the most out of your excavator with Volvo.

## Quick couplers

Volvo quick couplers are designed to work with Volvo attachments, delivering ultimate compatibility and unrivalled performance.



## Optional auxiliary hydraulics

Factory fitted breaker and shear piping as well as tilt and rotator piping increase versatility by enabling a wide range of additional attachments to be used.



## Hydraulic breakers

Volvo's durable hydraulic breakers have been designed for ultimate compatibility with Volvo excavators. The range has been built to break the most demanding materials and combines excellent performance with low noise and vibration levels.



## Attachment management system (AMS)

The AMS stores the settings for up to 20 hydraulic attachments. The system allows hydraulic flow adjustments to be accurately and easily set according to the needs of the tool being used.



# Adding value to your

# business

Being a Volvo customer means having a complete set of services at your fingertips. Volvo can offer you a long-term partnership, protect your revenue and provide a full range of customer solutions using high quality parts, delivered by passionate people. Volvo is committed to increasing the positive return on your investment and maximising uptime.



## Complete Solutions

Volvo has the right solution for you. So why not let us provide all your needs throughout the whole life cycle

of your machine? By listening to your requirements, we can reduce your total cost of ownership and increase your revenue.



## Genuine Volvo Parts

Our attention to detail is what makes us stand out. This proven concept acts as a solid investment in your machine's future. Parts are extensively tested and approved because every part is vital for uptime and performance. Only by using Genuine Volvo Parts, can you be sure that your machine retains the renowned Volvo quality.



## Service Network

In order to respond to your needs faster, a Volvo expert is on their way to your job site from one of our Volvo facilities. With our extensive infrastructure of technicians, workshops and dealers, Volvo has a comprehensive network to fully support you using local knowledge and global experience.







# CUSTOMER SUPPORT AGREEMENTS

The range of Customer Support Agreements offer preventive maintenance, total repairs and a number of uptime services. Volvo uses the latest technology to monitor machine operation and status, giving you advice to increase your profitability. By having a Customer Support Agreement you are in control of your service costs.

# Volvo EW205D in detail

## Engine

The engine, which provide excellent performance, is equipped with six cylinder, vertical, electronic-controlled high pressure fuel injectors, internal EGR, 6 liter in-line waste gate turbo charger, air-to-air intercooler and water cooled diesel engine type.

Engine	Volvo	D6E
Max. power at	r/min	2 000
Net (ISO9249/SAEJ1349)	kW	121.3
	hp	165
Gross (ISO 14396/SAE J1995)	kW	129.5
	hp	176
Max. torque	Nm	730
at engine speed	r/min	1 500
No. of cylinders		6
Displacement	l	5.7
Bore	mm	98
Stroke	mm	126

## Electrical System

High-capacity electrical system that is well protected. Waterproof double-lock harness plugs are used to secure corrosion-free connections. The main relays and solenoid valves are shielded to prevent damage.

Voltage	V	24
Batteries	V	2 x 12
Battery capacity	Ah	120
Alternator	V/Ah	28 / 80
Start motor	V - kW	24 - 5.5

## Undercarriage

Drive train: One big variable axial-piston motor on the two-step Power Shift gearbox gives power to front and rear axles.  
 Framework: All-welded robust torsion box frame.  
 Wheels: Alternative single and twin wheels available.  
 Front axle: Robust excavator axle with automatic or operator controlled front axle oscillation lock.

Oscillating	± °	7
with mudguards	± °	7
Twin wheels	type	10-20 14PR
Tractive force (net)	kN	110
Travel speed, on road	km/h	36
Travel speed, off road	km/h	9
Travel speed, creep	km/h	3.5
Min. turning radius	m	7,14

## Swing system

Max. slew speed	r/min	12
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## Brake system

Service brakes: servo-hydraulically manoeuvred self-adjusting wet multidiscs with two separate brake circuits.  
 Parking brake: negative wet disc in gear housing, spring applied and pressure released.  
 Digging brake: service brake with mechanical lock system.  
 Security system: The 2-circuit travel brakes are supplied with two accumulators in the event of failure in the service brake system.

## Cab

The operator's cab has easy access via a wide door opening. The cab is supported on hydraulic dampening mounts to reduce shock and vibration levels. These along with sound absorbing lining provide low noise levels. The cab has excellent all-round visibility. The front windshield can easily slide up into the ceiling, and the lower front glass can be removed and stored in the side door. Integrated air-conditioning and heating system: The pressurized and filtered cab air is supplied by an automatically-controlled fan. The air is distributed throughout the cab from 14 vents.  
 Ergonomic operator's seat: The adjustable seat and joystick console move independently to accommodate the operator. The seat has nine different adjustments plus a seat belt for the operator's comfort and safety.

## Sound Level

Sound level in cab according to ISO 6396

LpA	dB(A)	74
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External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC

LwA	dB(A)	102
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## Hydraulic system

The electro-hydraulic system and MCV (main control valve) use intelligent technology to control on-demand flow for high productivity, high-digging capacity and excellent fuel economy. The summation system, boom, arm and swing priority along with boom, arm and bucket regeneration provides optimum performance. The following important functions and working modes are included in the system:  
 Summation system: Combines the flow of both hydraulic pumps to ensure quick cycle times and high productivity.  
 Boom priority: Gives priority to the boom operation for faster raising when loading or performing deep excavations.  
 Arm priority: Gives priority to the arm operation for faster cycle times in leveling and for increased bucket filling when digging.  
 Swing priority: Gives priority to swing functions for faster simultaneous operations.  
 Regeneration system: Prevents cavitation and provides flow to other movements during simultaneous operations for maximum productivity.  
 Parking mode (P): Parking position for optimal safety.  
 Travel mode (T): Engine speed is controlled by travel pedal stroke and mode selection switch for low fuel consumption and noise. Work equipment are not able to move at this mode for optimal safety.  
 Working mode (W): Full working flow with adjustable engine rpm for normal working and best speed utilisation.  
 Creeping mode (C): Additional working mode for fixed lower travel speed.

## Main pump (type: 2 x Variable displacement axial piston pumps)

Max. flow	l/min	2 x 230
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## Pilot pump (type: Gear pump)

Max. flow	l/min	1 x 20
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## Brake + steering pump (type: Low noise gear pump)

Max. flow	l/min	1 x 41.5
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## Relief valve setting pressure

Implement	MPa	32.4/34.3
Travel system	MPa	34
Slew system	MPa	28
Pilot system	MPa	3.9

## Hydraulic Cylinders

Boom		2
Bore x Stroke	ø x mm	120 x 1 235
Arm		1
Bore x Stroke	ø x mm	135 x 1 540
Bucket		1
Bore x Stroke	ø x mm	120 x 1 065
Dozer blade		1
Bore x Stroke	ø x mm	115 x 273
Outrigger		2
Bore x Stroke	ø x mm	150 x 444

## Total Machine Weights

Machine with 5.65m boom, 2.7m arm, 734 kg / 860 l bucket, Standard counterweight.

With dozer blade and Outrigger	kg	20 860
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## Service Refill

Fuel tank	l	323
Hydraulic system, total	l	335
Hydraulic tank	l	148
Engine oil	l	32
Engine coolant	l	26
Swing reduction unit	l	7
Transmission	l	2.5

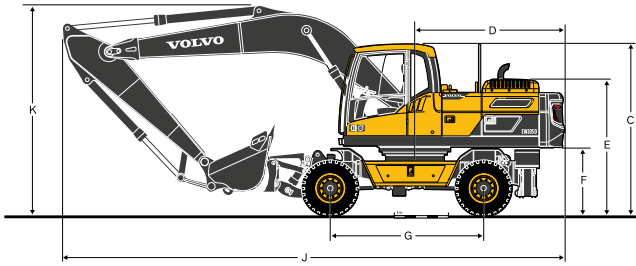
## Axle differential:

Front axle	l	11
Rear axle	l	15
Final drive	l	4 x 2.5

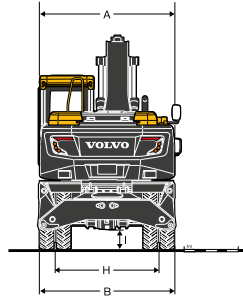
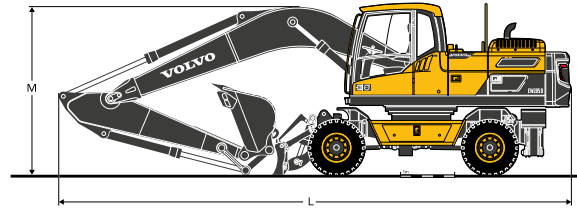


# Specifications

## TRAVEL POSITION

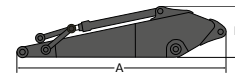
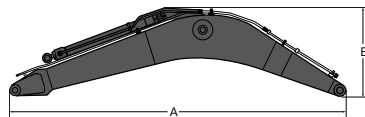


## TRANSPORTATION POSITION



### DIMENSIONS

Description	Unit	Front dozer blade and rear outrigger	
<b>Boom</b>	<b>m</b>	<b>5.65</b>	<b>5.65</b>
<b>Arm</b>	<b>m</b>	<b>2.7</b>	<b>2.9</b>
A Overall width of upper structure	mm	2 500	2 500
B Overall width	mm	2 500	2 500
C Overall height of cab	mm	3 180	3 180
D Tail swing radius	mm	2 800	2 800
E Overall height of engine hood	mm	2 520	2 520
F Counterweight clearance	mm	1 244	1 244
G Wheel base	mm	2 850	2 850
H Tread width	mm	1 914	1 914
I Min. ground clearance	mm	329	329
J Overall length	mm	9 310	9 315
K Overall height of boom	mm	3 985	3 990
L Overall length	mm	9 510	9 520
M Overall height of boom	mm	3 280	3 490



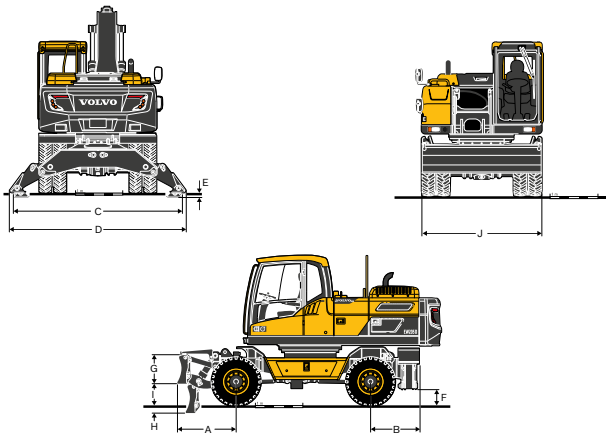
### DIMENSIONS

Description	Unit	Boom*	Arm**	
	<b>m</b>	<b>5.65</b>	<b>2.7</b>	<b>2.9</b>
A Length	mm	5 870	3 710	3 910
B Height	mm	1 650	870	860
Width	mm	670	440	440
Weight	kg	1 995	1 080	1 121

\*Boom: includes cylinder, piping and pin, excludes boom cylinder pin

\*\*Arm: includes cylinder, linkage and pin

# Specifications



## DIMENSIONS

Description	Unit			
<b>Front Dozer and Rear Outrigger</b>	Dozer to wheel	A	mm	1 239
	Outrigger to wheel	B	mm	1 035
	Width_digging	C	mm	3 609
<b>Outrigger</b>	Width	D	mm	3 774
	Digging depth	E	mm	114
	Clearance	F	mm	325
	Weight		kg	1 150
<b>Dozer Blade</b>	Height	G	mm	630
	Digging depth	H	mm	157
	Lifting height	I	mm	465
	Width	J	mm	2 500
	Weight		kg	690

## BUCKET SELECTION GUIDE

Bucket type	Capacity	Cutting width	Weight	Teeth	Front dozer blade and rear outrigger				
					5.65m Boom, 3 400 kg Counterweight		5.65m Boom, 3 800 kg Counterweight		
					L	mm	kg	EA	2.7m
<b>Direct fit buckets</b>	<b>General purpose</b>	860	1 100	748	4	C	C	C	C
		950	1 200	781	5	C	C	C	C
		1 100	1 350	843	5	B	B	C	B
<b>Quick coupler buckets (S type)</b>	<b>General purpose</b>	860	1 100	696	4	C	C	C	C
		950	1 200	762	5	C	B	C	C
		1 100	1 350	823	5	B	A	B	B

Please consult with your Volvo dealer for the proper match of buckets and attachments to suit the application. The recommendations are given as a guide only, based on typical operation conditions. Bucket capacity based on ISO 7451, heaped material with a 1:1 angle of repose.

## Maximum material density

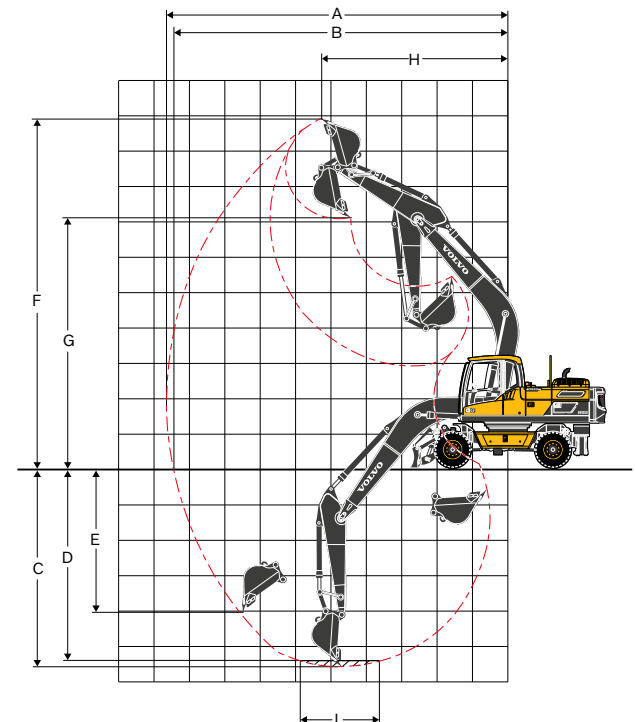
A	1.2~1.3 t/m <sup>3</sup>	Coal, Caliche, Shale
B	1.4~1.6 t/m <sup>3</sup>	Wet earth, Clay, Limestone, Sandstone
C	1.7~1.8 t/m <sup>3</sup>	Granite, Wet sand, Well blasted rock
D	>1.9 t/m <sup>3</sup>	Wet mud, Iron ore
X	Not recommended	

## WORKING RANGES WITH DIRECT FIT BUCKET

Description	Unit	Front dozer blade and rear outrigger	
Boom	m	5.65	5.65
Arm	m	2.7	2.9
A Max. digging reach	mm	9 685	9 890
B Max. digging reach on ground	mm	9 490	9 695
C Max. digging depth	Along	mm	5 565
	Across	mm	6 060
D Max. digging depth (l=2.44m level)	Along	mm	5 380
	Across	mm	5 875
E Max. vertical wall digging depth	mm	4 125	4 295
F Max. cutting height	mm	9 895	10 045
G Max. dumping height	mm	7 085	7 225
H Min. front swing radius	mm	3 310	3 330

## DIGGING FORCES WITH DIRECT FIT BUCKET

Bucket radius	mm	1 470	1 470	
Breakout force (bucket)	Normal	SAE J1179	kN	122
	Power boost	SAE J1179	kN	130
	Normal	ISO 6015	kN	136
	Power boost	ISO 6015	kN	144
Tearout force (arm)	Normal	SAE J1179	kN	100
	Power boost	SAE J1179	kN	106
	Normal	ISO 6015	kN	102
	Power boost	ISO 6015	kN	109
Rotation angle, bucket	deg	175	175	







# Equipment

## STANDARD EQUIPMENT

### Engine

Turbocharged, 4 stroke diesel engine with water cooling, direct injection and charged air cooler  
 Air filter with indicator  
 Air intake heater  
 Cyclone pre-cleaner  
 Fuel filter and water separator  
 Alternator, 80 A

### Electric / Electronic control system

Contronics - computerized monitoring and diagnostic system  
 GSM/GPS Caretrack and 3yr-Caretrack subscription  
 Machine status indication  
 Automatic idling system  
 One-touch power boost  
 Safety stop/start function  
 Adjustable LCD color monitor  
 Master electrical disconnect switch  
 Engine restart prevention circuit  
 Travel alarm  
 High-capacity halogen lights:  
 Frame-mounted 2  
 Boom-mounted 1  
 Batteries, 2 x 12 V / 120 Ah  
 Start motor, 24 V / 5.5 kW  
 Rearview & Sideview camera

### Superstructure

Service walkway with anti-slip grating  
 Centralized lubricating point for swing bearing  
 Tool storage area  
 Counterweight: 3 400kg  
 Undercover

### Undercarriage

Lower frame with Front dozer blade and rear outrigger  
 2-speed power transmission plus creep  
 Oscillating front axle  $\pm 7^\circ$  with mudguards  
 2-circuit travel brakes  
 Maintenance-free propeller shafts  
 Tire 10.00-20-14PR  
 Emergency steering

### Hydraulic system

Automatic hydraulic system  
 Summation system  
 Boom priority  
 Arm priority  
 Swing priority  
 "ECO" mode fuel saving technology  
 Boom, arm and bucket regeneration valves  
 Swing anti-rebound valves  
 Boom and arm holding valves  
 Multi-stage filtering system  
 Cylinder cushioning  
 Cylinder contamination seals

### Cab and interior

ROPS (ISO12117-2) certified cab with fixed roof hatch  
 Rubber mounts with spring  
 Fabric seat without heater  
 Heater and air-conditioner, automatic  
 Adjustable operator seat and joystick control console  
 Adjustable steering wheel  
 Control joysticks  
 Flexible antenna  
 Control lock out lever  
 Cab, all-weather sound suppressed, includes:  
 Cup holders  
 Door locks  
 Tinted and safety glass  
 Floor mat  
 Horn  
 Pull-up type front window  
 Removable lower windshield  
 Seat belt  
 Windshield wiper with intermittent feature  
 Sun Screen, front/roof/rear

## STANDARD EQUIPMENT

Master key

### Digging equipment

Boom: 5.65m  
 Arm: 2.7m with strip  
 Linkage

### Service

Tool kit, daily maintenance

## OPTIONAL EQUIPMENT

### Engine

Block heater: 240 V  
 Oil bath pre-cleaner  
 Diesel coolant heater, 5 kW  
 Water separator with heater  
 Extra water separator  
 Auto engine shutdown  
 Fuel filler pump: 35 lpm with auto stop

### Electric

Extra work lights:  
 Boom-mounted 1  
 Cab-mounted 3 (front 2, rear 1)  
 Counterweight-mounted 1  
 Anti-theft system  
 Flashing beacon\_LED  
 Air compressor  
 Microphone

### Superstructure

Counterweight: 3 800kg

### Undercarriage

Mudguard

### Hydraulic system

Boom hose rupture valve with overload warning device  
 Arm hose rupture valve  
 Hydraulic piping:  
 Hammer & shear, 1 and 2 pump flow  
 Slope/Rotator  
 Quick coupler  
 Volvo hydraulic quick coupler S1  
 Hydraulic oil, ISO VG 32, 46, 68  
 Hydraulic oil, longlife oil 32, 46, 68

### Cab and interior

ROPS (ISO12117-2) certified cab with openable roof hatch  
 Fabric seat with heater  
 Fabric seat with heater and air suspension  
 Radio with MP3/USB  
 Cab-mounted falling object guard (FOG)  
 Cab-mounted falling object guard (FOG)\_Hinge type  
 Cab-mounted falling object protective structure (FOPS)  
 Smoker kit (ashtray and lighter)  
 Safety net for front window  
 Safety net for lower window only  
 Front rain shield  
 Sun shield, roof hatch (steel)  
 Specific key

### Digging equipment

Arm: 2.9m with strip

### Service

Tool kit, full scale  
 Spare parts kit



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## SELECTION OF VOLVO OPTIONAL EQUIPMENT

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**Breaker/Shear piping (X1)**



**Emergency steering**



**Rear-view camera**



**Quick-coupler piping**



**Extra work light**



**Air compressor**



Not all products are available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.

**VOLVO**

**Volvo Construction Equipment**

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