



Volvo Construction Equipment

EC80D PRO

Volvo Excavators 7.4-8.3 t 43 kW



Built bigger. Designed stronger

Introducing the Volvo EC80D Pro – the biggest excavator in its class. If you're looking for a strong, stable and durable platform, look no further than the EC80D Pro which boasts new levels of strength and durability. Capitalize on greater machine size and weight and reap the benefits of maximum productivity with Volvo.

Bucket size

Thanks to its large size, the EC80D Pro can be used with a bigger bucket than similar machines in the same class – increasing productivity. The Volvo designed bucket is specifically matched to the machine's size for maximum performance.



Boom and arm

The boom and arm are made from high strength tensile steel for maximum durability and uptime. The boom is fixed to the superstructure at the side of the cab for improved stability and visibility of the job site.



Working range

The configuration of the boom and arm provide optimal working range – allowing the machine to reach further and dig deeper for increased productivity.





MACHINE SIZE



The EC80D Pro has been built larger and heavier than competitor products in the same class to ensure superior productivity and profitability. The wider and longer undercarriage provides excellent stability and lifting capacity together with fantastic ground clearance and working range.



DIGGING POWER



High digging force is delivered through optimum engine power and hydraulic pressure while excellent pump flow and swing torque enable faster cycle times – particularly when working with hard materials and a larger bucket.

More performance, less fuel

Volvo prides itself on producing machines that give you more power while using less fuel. The EC80D Pro's enhanced hydraulic system is perfectly matched to the engine – delivering high performance and reduced fuel consumption. Features including industry-leading lift capacity and high digging power give you the most efficient operation possible – saving you time and money. The EC80D Pro is in a league of its own.

Volvo engine with auto-idle

The robust Volvo D2.6 Tier 3 diesel engine delivers 43kW in power as well as increased fuel efficiency. For reduced noise levels and lower fuel consumption, the auto-idle function decreases the engine speed to idle when the controls are inactive for five seconds or the left-hand console is raised. To ensure efficient operations, the engine returns to the pre-selected speed when a control is touched.



Lifting capacity

The EC80D Pro features industry-leading lifting capacity which, combined with strong hydraulic performance and stability, delivers exceptional lift and handling capabilities.



Tractive force

Superior tractive force enables the machine to climb gradients with ease and travel over rough terrain. If an optional dozer blade is selected, tractive force will also aid backfilling and landscaping.



Swing performance

The balance between the torque and swing speed permits fast and precise placement of the attachment – even when working on a slope.



Optimize productivity

At Volvo we understand that when operators are comfortable they experience less fatigue and work more productively. That's why we've built an industry-leading, spacious operator environment with excellent allaround visibility. Operators will feel in control and perform efficiently all day long in this superior working environment. Witness the benefits for yourself and experience new levels of profitability.

ROPS

Volvo recommends an optional Roll Over Protective Structure (ROPS) certified cab when working in challenging applications. This provides increased operator safety in the unlikely event of machine roll over.



I-ECU monitor

The large monitor clearly presents machine information and puts the operator in control, enabling high performance and efficiency. The operator and service technician can make quick visual and diagnostic checks, increasing uptime and productivity.



Travel alarm

For added safety a buzzer sounds to warn bystanders when the machine moves in any direction.



RPM control

An electrical rpm control system allows the operator to precisely adjust and optimize engine rpm in any application. By using the rpm settings, fuel efficiency and machine performance are maximized. There are nine rpm settings as well as the P (Power) max mode.





VOLVO CAB



Volvo's industry-leading cab offers enhanced visibility from large expanses of glass. For reduced fatigue and increased productivity, the spacious and comfortable environment provides easy to access controls, an efficient heating/air conditioning system and vibration and noise isolation.



SERVICEABILITY



Grouped service points and excellent access to the engine compartment – which can be fully opened – allows regular checks to be done faster for maximum machine uptime.

Smart serviceability

Taking care of your excavator shouldn't be complicated. That's why the EC80D Pro is packed with maintenance saving features to help you work for longer and sustain productivity day in and day out. Benefit from the Volvo experience and enjoy intuitive maintenance with the EC80D Pro.

Fuel filler pump

Easily fill the large capacity diesel tank from the ground via an electric pump which includes an automatic stop function. The tank is filled within four minutes at a delivery rate of 35 liters per minute. For ease of operation the pump is switched on next to the tank.



Tool box and step

The front step provides easy maintenance and service access to the main hydraulic check points. Tools and a grease gun can be stored inside a large tool box located on the right, front side of the machine.



Hydraulic gauge

The hydraulic oil level can be seen from inside the cab – allowing the operator to carry out fast maintenance checks for increased uptime.



VCADS Pro

The VCADS Pro (Volvo Computer Aided Diagnostic System Professional) analysis and programming tool makes it easy to control the machine for increased performance.



Designed to meet your needs

MACHINE SIZE



The EC80D Pro is bigger and heavier than competitor products in the same class to ensure more productivity and profitability.

Boom and arm

The boom and arm are made from high strength tensile steel for maximum durability and uptime.

VCADS Pro

This analysis and programming tool makes it easy to control the machine for increased performance.

Lifting capacity

Industry-leading lift capacity delivers exceptional lifting and handling capabilities.

DIGGING POWER



The enhanced hydraulic system is perfectly matched to the engine to deliver high digging force.

Bucket size

Due to its larger size, the EC80D Pro can be used with a bigger bucket than similar machines in the same class – increasing productivity.

Maintenance free swing motor

The maintenance free swing motor design features a robust axial piston providing excellent performance.





ROPS

An optional Roll Over Protective Structure (ROPS) certified cab is available for increased operator safety.

VOLVO CAB



The industry-leading cab offers a spacious and comfortable environment with enhanced visibility for reduced fatigue and increased productivity.

SERVICEABILITY



Grouped service points and ground level access allow regular checks to be done faster for maximum machine uptime.

Fuel filler pump

Easily fill the large capacity diesel tank in less than four minutes via an electric pump. The pump features an automatic stop function.

Volvo engine with auto-idle

The powerful Volvo D2.6 Tier 3 engine maximizes efficiency and features an auto-idle function to lower fuel consumption and reduce noise levels.

Tool box and step

Front step provides easy maintenance access. Tools are stored within a large box located above the step.

CUSTOMER SUPPORT AGREEMENTS



Customer Support Agreements offer service and maintenance with maximum cost control and minimum downtime.



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.

First-class support

At Volvo we're not just committed to providing you with a quality machine – we can also deliver continuous state-of-the-art support through our customer solutions. On site, time means money and that's why we have a unique, global dealer support network to ensure your machine's availability during its entire lifetime. Take advantage of the excellent Volvo support network and enjoy access to all the products and competence required to ensure your machine generates maximum profit and growth for your business.

Operator training

Eco Operator courses are a fast and easy way to increase productivity and reduce costs. Operators are trained to become more productive, fuel efficient and safer as well as reduce wear and tear on your machines. The program teaches correct operation and maneuvering as well as how to plan work in the smartest, most efficient way.



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.



Support center

Volvo customers have direct access to the unique dealer support network. Customers can telephone a support number 24 hours a day, seven days a week, which identifies the call and transfers it to the local dealer where a dedicated team will take care of your needs – maximizing machine uptime.



Get the most from your excavator

For increased versatility and profitability, the EC80D Pro has been built attachment ready. Get the most out of your machine with Volvo attachments which have been designed to perfectly match and work in harmony with your excavator. The EC80D Pro is a versatile machine that can effectively perform a variety of tasks. Get the job done with reduced cycle times and reduced fuel consumption with Volvo.

Interfaces



Direct fit

Direct fit is designed to fit directly to the excavator and excels when the machine is dedicated to one application. This configuration provides the highest amount of breakout force.



Mechanical quick coupler

The mechanical quick coupler allows attachments to be changed quickly and efficiently. Making it easier on site, the quick coupler picks up different Volvo buckets in both face shovel position and normal digging position. It's also the perfect match for Volvo breakers.

Buckets



General purpose buckets

Designed to be used in a large variety of conditions for all trenching and handling jobs. The durable buckets can work in material like loose gravel, crushed rock, dirt and soil. Available in different widths: 770-890 mm.

Hydraulic breaker

Designed for optimum compatibility with Volvo machines, the Volvo hydraulic breaker range combines excellent operating performance with low vibration: Increase performance and productivity / Reliable and simple to maintain / Designed for a perfect fit



Wear parts

An all-round system that combines strength and durability with quick and easy change.

Tooth

Engineered for combined durability and penetration. Manufactured with optimal material composition and heat treatment process.



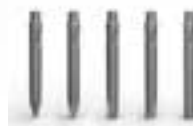
Adapter

Designed for optimal fitting with the tooth, better retention and better cutting edge protection.



Breaker tools

We offer an extensive range of high quality tools using high tensile steel to suit every application.





BREAKER PIPING

The optional hydraulic breaker piping gives you the versatility and flexibility needed on a variety of job sites – whether you're working in the utilities, building, road construction or any other segment.

Volvo EC80D Pro in detail

Engine

Volvo engine Tier 3 (Stage 3) emissions compliant diesel engine. The engine uses precise, high pressure fuel injectors, Air Filter: 2 stage. Automatic Idling System: Reduces engine speed to idle when the levers and pedals are not activated resulting in less fuel consumption and low cab noise levels.

Model	Volvo	D2.6D
Max. power at	r/min	2 000
Net (ISO 9249/SAEJ1349)	kW	40.9
	hp	56
Gross (SAE J1995)	kW	43
	hp	58
Max. torque	Nm	225.8
at engine speed	r/min	1 000
No. of cylinders		4
Displacement	l	2.62
Bore	mm	87
Stroke	mm	110

Electrical System

Voltage	V	12
Batteries	V	12
Battery capacity	Ah	100
Alternator	V/Ah	12/60
Starter motor output	V - kW	12 - 2.5

Hydraulic System

Closed-center, load-sensing hydraulic system (CCLS) providing fuel savings and independent control of functions.

Variable-displacement, load-sensing pump for all equipment:

Maximum flow	l/min	1 x 176
Maximum operating pressure	MPa	29.4

Pilot pump (Gear pump) for the power assistance circuit:

Maximum flow	l/min	1 x 16
Maximum operating pressure	MPa	3.4

Swing circuit:

Maximum operating pressure	MPa	24.5
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Travel circuit:

Maximum operating pressure	MPa	29.4
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Swing System

Swing provided by radial piston motor and reduction gear, use hydraulic oil for lubrication.

Max. swing speed	r/min	10
Max. swing torque	kNm	21.5

Undercarriage

The undercarriage has a robust X-shaped frame. Greased and sealed track chains are standard.

Track shoes		2 x 39
Link pitch	mm	154
Shoe width	mm	450
Bottom rollers		2 x 5
Top rollers		2 x 1

Travel system

Each track is powered by an automatic two-speed shift travel motor. The track brakes are multi-disc, spring-applied and hydraulic released. The travel motor, brake and planetary gears are well protected within the track frame.

Travel speed low	km/h	2.6
Travel speed high	km/h	5.10
Max. drawbar pull	kN	65
Gradeability	°	35

Service Refill

Fuel tank	l	145
Hydraulic system, total	l	140
Hydraulic tank	l	80
Engine oil	l	10
Engine coolant	l	11.4
Travel reduction unit	l	2 x 1.6

Sound Level

Sound level in cab according to ISO 6396

LpA	dB(A)	80
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External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC

LwA	dB(A)	99
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BUCKETS



Buckets

	Width	Weight	Capacity
Units	mm	kg	liter
	800	212	310
	860	220	340
	920	228	370

MACHINE WEIGHTS AND GROUND PRESSURE

EC80D Pro with 3.7 m boom, 1.65 m arm, 340 l (220kg) bucket, 650 kg counterweight

Description	Shoe width	Operating weight	Ground pressure
Units	mm	kg	kPa
Steel track	450	7 400	33.3
Operating weight; including operator's weight 80kg			

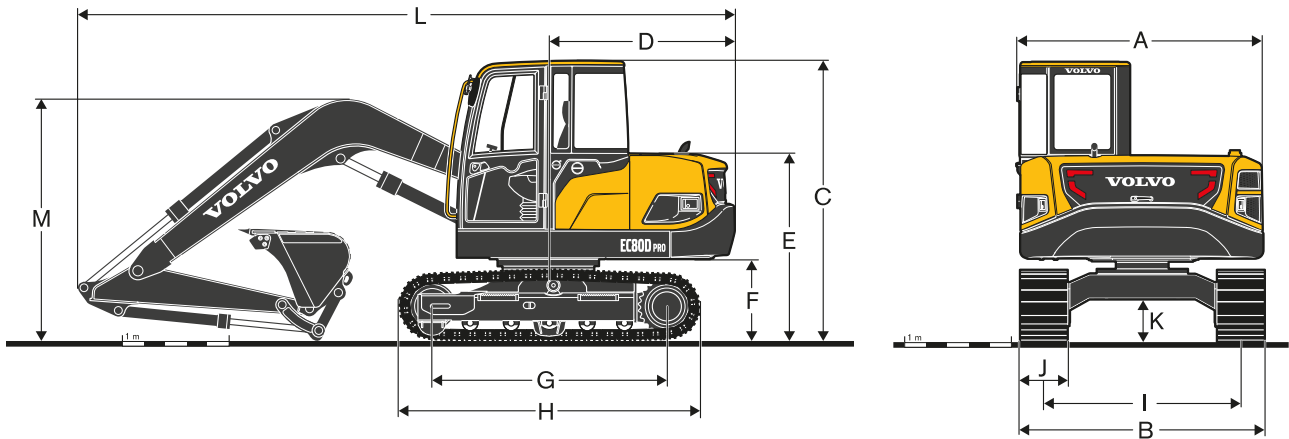
DIGGING

Digging Performance

Breakout force - bucket	SAE J1179	kN	49
	ISO 6015	kN	55
Tearout force - dipper arm	SAE J1179	kN	39
	ISO 6015	kN	40
Rotation angle, bucket		°	174

Specifications

DIMENSIONS



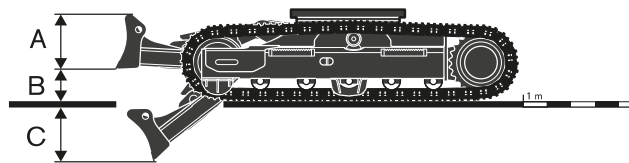
Description	Unit	
A	Overall width of upper structure	mm 2 280
B	Overall width	mm 2 300
C	Overall height of cab	mm 2 655
D	Tail swing radius	mm 1 750
E	Overall height of engine hood	mm 1 740
F	Counterweight clearance*	mm 755
G	Tumbler length	mm 2 200
H	Track length	mm 2 850
I	Track gauge	mm 1 850
J	Shoe width	mm 450
K	Min. ground clearance*	mm 400
L	Overall length	mm 6 165
M	Overall height of boom	mm 2 360

* Without shoe grouser

Description		Boom		Arm	
		unit		unit	
		m		1.65	
A	Length	mm	3 900	mm	2 300
B	Height	mm	1 950	mm	560
	Width	mm	420	mm	190
	Weight	kg	770	kg	300

Boom: Includes cylinder, piping and pin, excludes boom cyl. Pin

Arm: Includes cylinder, linkage and pin

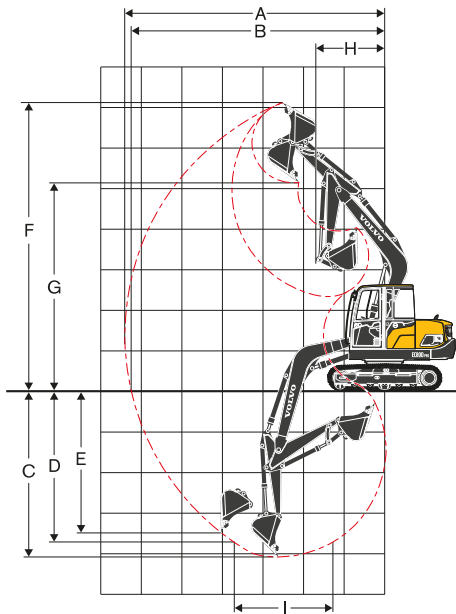


Dozer blade

Description	unit	
A	Height	mm 470
	Width	mm 2 300
B	Lifting height	mm 490
C	Digging depth	mm 455

Specifications

WORKING RANGES



Description	unit		
A	Max. digging reach	mm	6 420
B	Max. digging reach on ground	mm	6 270
C	Max. digging depth	mm	4 100
D	Max. digging depth (l = 2.44m level)	mm	3 740
E	Max. vertical wall digging depth	mm	3 530
F	Max. cutting height	mm	7 130
G	Max. dumping height	mm	5 150
H	Min. front swing radius	mm	1 690

LIFTING CAPACITY EC80D Pro.

Lifting capacity at the arm end without bucket.

For lifting capacity including bucket. Simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

	Lifting hook related to ground level	unit	2.0 m		3.0 m		4.0 m		5.0 m		Max. reach		
			Along	Across	Along	Across	Along	Across	Along	Across	Along	Across	Max. m
Boom: 3.7m	6.0 m	kg									*1 780	*1 780	2.5
Arm: 1.65m	5.0 m	kg			*1 470	*1 470					*1 560	*1 560	3.9
Shoe: 450mm	4.0 m	kg			*1 590	*1 590	*1 500	*1 500			*1 520	1 410	4.7
CWT: 650kg	3.0 m	kg	*2 870	*2 870	*1 990	*1 990	*1 660	*1 660	1 480	1 240	1 400	1 180	5.1
Without Dozer blade	2.0 m	kg			*2 540	*2 540	*1 900	1 710	1 440	1 210	1 280	1 070	5.4
	1.0 m	kg			*2 960	2 470	1 950	1 620	1 400	1 170	1 240	1 040	5.4
	0 m	kg			2 950	2 390	1 890	1 570	1 370	1 140	1 280	1 070	5.2
	-1.0 m	kg	*4 210	*4 210	2 940	2 380	1 880	1 550			1 430	1 190	4.9
	-2.0 m	kg	*3 600	*3 600	*2 590	2 420	*1 850	1 580			*1 710	1 480	4.2
	-3.0 m	kg	*2 450	*2 450	*1 660	*1 660					*1 600	*1 600	3.1
Boom: 3.7m	6.0 m	kg									*1 780	*1 780	2.5
Arm: 1.65m	5.0 m	kg			*1 470	*1 470					*1 560	*1 560	3.9
Shoe: 450mm	4.0 m	kg			*1 590	*1 590	*1 500	*1 500			*1 520	1 510	4.7
CWT: 650kg	3.0 m	kg	*2 870	*2 870	*1 990	*1 990	*1 660	*1 660	*1 520	1 340	*1 520	1 270	5.1
Dozer blade down	2.0 m	kg			*2 540	*2 540	*1 900	1 840	1 840	1 310	*1 550	1 160	5.4
	1.0 m	kg			*2 960	2 670	*2 110	1 750	*1 700	1 260	*1 580	1 130	5.4
	0 m	kg			*3 080	2 590	*2 220	1 700	*1 730	1 240	*1 630	1 160	5.2
	-1.0 m	kg	*4 210	*4 210	*2 960	2 580	*2 170	1 680			*1 680	1 290	4.9
	-2.0 m	kg	*3 600	*3 600	*2 590	*2 590	*1 850	1 710			*1 710	1 610	4.2
	-3.0 m	kg	*2 450	*2 450	*1 660	*1 660					*1 600	*1 600	3.1
Boom: 3.7m	6.0 m	kg									*1 780	*1 780	2.5
Arm: 1.65m	5.0 m	kg			*1 470	*1 470					*1 560	*1 560	3.9
Shoe: 450mm	4.0 m	kg			*1 590	*1 590	*1 500	*1 500			*1 520	1 510	4.7
CWT: 650kg	3.0 m	kg	*2 870	*2 870	*1 990	*1 990	*1 660	*1 660	*1 520	1 340	*1 520	1 270	5.1
Dozer blade up	2.0 m	kg			*2 540	*2 540	*1 900	1 840	*1 600	1 310	1 470	1 160	5.4
	1.0 m	kg			*2 960	2 670	*2 110	1 750	1 600	1 260	1 430	1 130	5.4
	0 m	kg			*3 080	2 590	2 170	1 700	1 580	1 240	1 480	1 160	5.2
	-1.0 m	kg	*4 210	*4 210	*2 960	2 580	2 150	1 680			1 640	1 290	4.9
	-2.0 m	kg	*3 600	*3 600	*2 590	*2 590	*1 850	1 710			*1 710	1 610	4.2
	-3.0 m	kg	*2 450	*2 450	*1 660	*1 660					*1 600	*1 600	3.1

Notes: 1. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards.

2. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load.

3. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.

Equipment

EQUIPMENT	Standard	Optional
Engine		
Low-emission Volvo diesel engine	•	
Standard cooling system(45 deg. C)	•	
Two-stage air filter	•	
Fuel filter and water separator	•	
Fuel filler pump: 35 l/min, with automatic shut-off		•
Alternator, 60 A	•	
Electric/Electronic control system		
Safe engine start function	•	
Automatic idling system	•	
Halogen working lights; Frame-mounted 1, Boom-mounted 1	•	
Extra working lights; Cab-mounted 2 (front 1, rear 1)		•
Rotating warning beacon		•
Travel alarm		•
Battery, 12 V / 100 Ah	•	
Start motor, 12 V / 2.5 kW	•	
Air compressor		•
Hydraulic system		
Automatic two speed travel motors	•	
Hose rupture valve for boom		•
Cylinder cushioning	•	
Hydraulic fluid mineral 46	•	
X1 Hammer control		•
X1 Hammer boom piping		•
High Altitude pump		•

EQUIPMENT	Standard	Optional
Cab and interior		
Cab with slide window, CN GPS	•	
Fabric operator seat with suspension	•	
Control joystick with LH/RH one button	•	
Heater and air-conditioner	•	
AM/FM stereo with USB	•	
Hour meter (non analog)	•	
ROPS certified cab		•
Head rest for fabric seat		•
Seat belt, 2 inch retractable		•
Mechanical hour meter		•
FOG (Falling Object Guard)		•
FOPS (Falling Object Protection Structure)		•
Window safety net		•
Frame		
Lower frame without dozer blade	•	
Lower frame with dozer blade		•
650kg counterweight	•	
Undercarriage		
Greased and sealed track link	•	
450mm steal track	•	
Digging equipment		
3.7m Boom, 1.65m Arm	•	
3.7m HD Boom, 1.65m HD Arm		•
Linkage	•	
Service		
Tool kit, full scale		•
Tool kit-daily maintenance	•	
Spare parts	•	

SELECTION OF VOLVO OPTIONAL EQUIPMENT

Dozer blade



X1 piping



Rotating beacon



HD Boom and HD Arm



FOG



Extra work lights



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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