

Volvo Excavators 34.3 - 38.7 t 286 hp

EC360

Volvo Construction Equipment

EC360

With a modern cab and easy to service, the EC360 can help you keep productivity high and your TCO low.



Get an edge thanks to versatility

Commonly used in quarries, for trenching, digging or preparing construction sites, the EC360 is a versatile machine. Regardless of applications, the EC360F is a straightforward solution with big payback. Save fuel, lower Total Cost of Ownership and boost the profitability of your operation. Now even easier to service and with a comfortable modern cab, it is a machine that meets the requirements of everyone from owner to operator.



Operator comfort

- More precise controls
- Quieter cab
- Personalized settings for greater comfort
- ROPS cab as standard



Serviceability

- Ground level access for service
- Long service intervals
- Grouped filters and lubrication points
- Quick and easy oil changes



Fuel Efficiency

- Up to 6% improvement
- Powerful and eficient Volvo engine
- Lower engine RPM
- Hydraulic system improvement



Productivity

- Volvo Active Control
- Dig Assist with On-Board Weighing
- Fast cycle times
- Boom/Swing & Boom/Travel priority functions

Volvo EC360 in detail

Engine		
Engine	Volvo	D8L
Max power at	r/min	1 720
Net, ISO 9249/SAE J1349	kW	209
	hp	284
Gross, ISO 14396/SAE J1995	kW	210
	hp	286
Max torque	Nm	1 335
at engine speed	r/min	1 350
No. of cylinders		6
Displacement	l	7.7
Bore	mm	110
Stroke	mm	135

Electrical system		
Voltage	V	24
Batteries	V	2 x 12
Battery capacity	Ah	180*2
Alternator	V/A	28/120
Start motor	V - kW	24-5.5

Undercarriage and structures		
The undercarriage has a robust X-shaped frame. Greased and sealed track chains are standard.		
Track shoes		2 x 48
Link pitch	mm	216
Shoe width	mm	600
Shoe width, triple grouser	mm	800
Shoe width, double grouser	mm	600
Bottom rollers		2 x 8
Top rollers		2 x 2

Swing system		
The swing system uses an axial piston motors, driving a planetary gearbox for maximum torque. An automatic holding brake and antirebound valve are standard.		
Max. slew speed	r/min	10.4
Max. slew torque	kNm	126

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.		
Max. drawbar pull	kN	261
Max. travel speed (low)	km/h	3.28
Max. travel speed (high)	km/h	5.06
Gradeability	°	35



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 airconditioning and heating system: The pressurized and filtered cab air is supplied by an automaticallycontrolled 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 12 different adjustments plus a seat belt for the operator's comfort and safety. Refrigerant of the type R134a is used when this machine is equipped with air conditioning. Contains fluorinated greenhouse gas R134a, Global Warming Potential 1430 CO_2-eq.

Sound Level

Sound pressure level in cab according to ISO 6396		
L_{pA}	dB	78
External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC		
L_{WA}	dB	107

Service Refill

Fuel tank	l	543
Hydraulic system, total	l	465
Hydraulic tank	l	230
Engine oil	l	30
Engine coolant	l	44
Slew reduction unit	l	6
Travel reduction unit	l	2 x 6.8

Hydraulic system

The new electro-hydraulic system and new MCV (main control valve) use intelligent technology to control on-demand flow for highproductivity, high-digging capacity and excellent fuel consumption.
The following important functions are included in the system for optimum performance:
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.
Power boost: All digging and lifting forces are increased.
Holding valves: Boom and arm holding valves prevent the digging equipment from creeping.

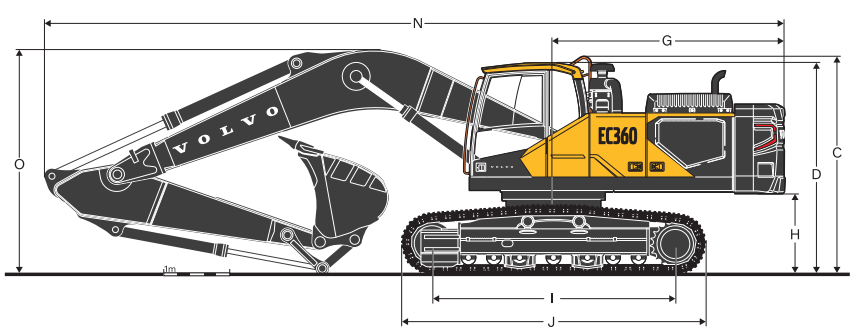
Main pump: Type 2 x variable displacement axial piston pumps		
Maximum flow	l/min	2 x 288
Pilot pump: Type Gear pump		
Maximum flow	l/min	20
Max. pressure		
Implement	MPa	33.3 / 37.8
Travel circuit	MPa	35.3
Slew circuit	MPa	27.9
Pilot circuit	MPa	3.9

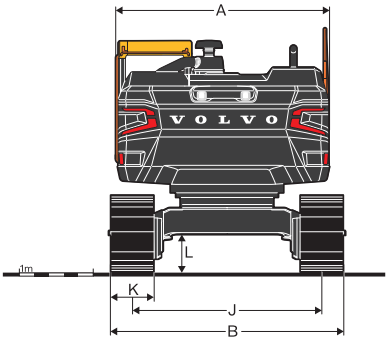
Hydraulic Cylinders

Mono boom		2
Bore x Stroke	ø x mm	150 x 1 530
Arm		1
Bore x Stroke	ø x mm	170 x 1 700
Bucket		1
Bore x Stroke	ø x mm	140 x 1 285



Specifications

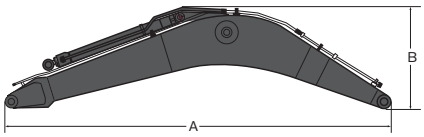


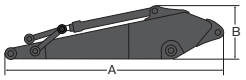


DIMENSIONS

	Unit	EC360F L	
Boom	**m**	**6.45**	**6.2**
Arm	**m**	**3.2**	**2.6**
A. Overall width of upper structure	mm	2 890	2 890
B. Overall width	mm	3 190	3 190
C. Overall height of cab	mm	3 175	3 175
D. Overall height of handrail	mm	3 275	3 275
F. Tail swing radius	mm	3 600	3 600
G. Overall height of engine hood	mm	2 990	2 990
H. Counterweight clearance *	mm	1 170	1 170
I. Tumbler length	mm	4 020	4 020
J. Track length	mm	4 945	4 945
K. Track gauge	mm	2 590	2 590
L. Shoe width	mm	600	600
M. Min. ground clearance *	mm	500	500
N. Overall length	mm	11 190	11 020
O. Overall height of boom	mm	3 380	3 490

* Without shoe grouser



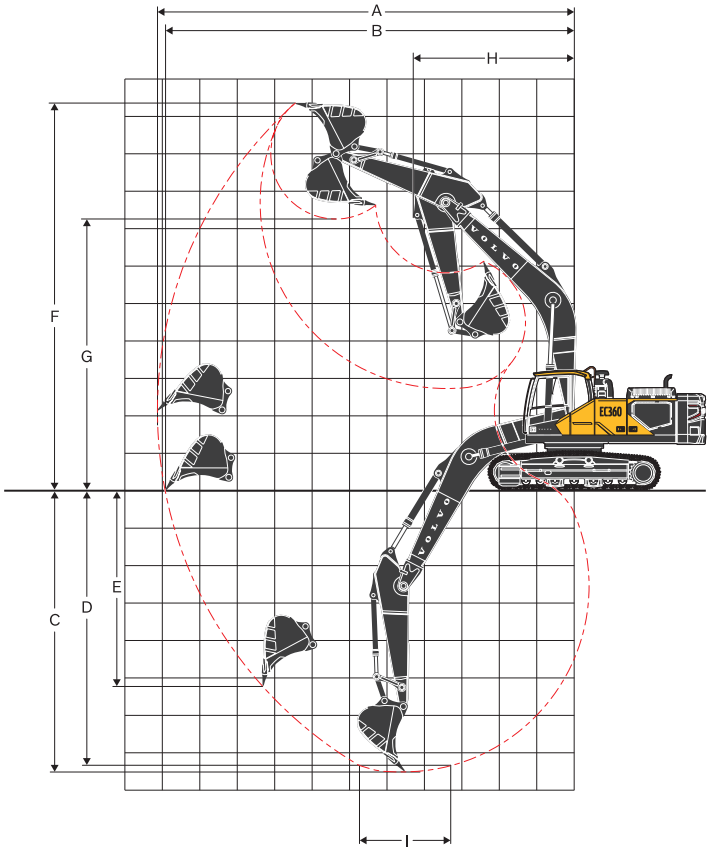


DIMENSIONS

Description	Unit	Boom		Description	Unit	Arm	
	m	**6.45**	**6.2**		**m**	**3.2**	**2.6**
A. Length	mm	6 708	6 451	A. Length	mm	4 347	6 451
B. Height	mm	2 157	1 678	B. Height	mm	1 062	1 717
Width	mm	816	816	Width	mm	478	816
Weight	kg	3 162	3 206	Weight	kg	1 880	1 806

* Includes cylinder, piping and pin

* Includes cylinder, linkage and pin



WORKING RANGES WITH DIRECT FIT BUCKET					
Description			**Unit**	**EC360F**	
Boom			**m**	**6.45**	**6.2**
Arm			**m**	**3.2**	**2.6**
A. Max. digging reach			mm	11 115	10 440
B. Max. digging reach on ground			mm	10 905	10 210
C. Max. digging depth			mm	7 485	6 740
D. Max.digging depth (I=(2.44 m level)			mm	7 310	6 550
E. Max. vertical wall digging depth			mm	5 500	5 260
F. Max. cutting height			mm	10 330	10 080
G. Max. dumping height			mm	7 245	6 820
H. Min. front swing radius			mm	4 285	4 120
DIGGING FORCES WITH DIRECT FIT BUCKET					
Breakout force (bucket)	Normal	SAE J1179	kN	177	206
	Power boost	SAE J1179	kN	192	224
	Normal	ISO 6015	kN	201	236
	Power boost	ISO 6015	kN	219	257
Tearout force (arm)	Normal	SAE J1179	kN	156	183
	Power boost	SAE J1179	kN	170	200
	Normal	ISO 6015	kN	160	190
	Power boost	ISO 6015	kN	174	206

Specifications

GROUND PRESSURE

EC360F L

Description	Shoe width	Operating weight	Ground pressure	Overall width	Operating weight	Ground pressure	Overall width
	mm	kg	kPa	mm	kg	kPa	mm
Triple grouser	600	36 070	69.2	3 190	36 320	69.7	3 190
	600 (HD)	36 120	69.3	3 190	36 370	69.8	3 190
	700	36 700	60.3	3 290	36 950	60.8	3 290
	800	37 090	53.4	3 390	37 340	53.7	3 390
Double grouser	600	36 770	70.5	3 190	37 020	71.0	3 190
		EC360F L with LC undercarriage, 6.45 m HD boom, 3.2 m HD arm, 1 878 kg bucket, 7 000 kg counterweight			EC360F L with LC undercarriage, 6.45 m HD boom, 3.2 m HD arm, 1 878 kg bucket, 7 250 kg counterweight		
Description	Shoe width	Operating weight	Ground pressure	Overall width	Operating weight	Ground pressure	Overall width
	mm	kg	kPa	mm	kg	kPa	mm
Triple grouser	600	36 210	69.5	3 190	36 460	69.9	3 190
	600 (HD)	36 260	69.6	3 190	36 510	70.0	3 190
	700	36 840	60.6	3 290	37 090	61.0	3 290
	800	37 230	53.6	3 390	37 480	53.9	3 390
Double grouser	600	36 910	70.8	3 190	37 160	71.3	3 190
		EC360F L with LC undercarriage, 6.2 m ME boom, 2.6 m ME arm, 2 050 kg bucket, 7 000 kg counterweight			EC360F L with LC undercarriage, 6.2 m ME boom, 2.6 m ME arm, 2 050 kg bucket, 7 250 kg counterweight		

BUCKET SELECTION GUIDE

Bucket Type		Capacity	Cutting width	Weight	Recommended maximum material density (kg/m³)	
					EC360F L with 600 mm shoe, 7 000 kg counterweight	EC360F L with 600 mm shoe, 7 250 kg counterweight
					6.45 m HD Boom	6.2 m ME Boom
		L	mm	kg	H3.2 m Arm	ME2.6 m Arm
Direct fit Buckets	HD	1 610	1 564	1 724	2 100	2 100
		1 670	1 380	1 570	2 100	2 100
		1 670	1 380	1 773	2 100	2 100
		1 670	1 380	1 821	2 100	2 100
		1 670	1 380	1 861	2 100	2 100
		1 920	1 500	1 878	1 800	2 100
		1 920	1 500	1 925	1 800	2 100
		1 920	1 500	1 957	1 800	2 100
		1 920	1 500	2 004	1 800	2 100
		2 330	1 750	1 910	1 500	1 800
		2 330	1 750	2 127	1 400	1 700
		2 330	1 750	2 163	1 400	1 700
		2 330	1 750	2 206	1 400	1 700

Please consult with your Volvo dealer for the proper match of buckets and attachments to suit the application.
(In case of using bigger bucket than regional standard MRS, consultation with R&D is highly recommended)
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 load : Payload, bucket and additional tools such as quick coupler, rotator, ...
VA Boom : Variable angle boom or two-piece boom

Maximum materal density
D: 2 100 kg/m³ (3 500 lb/yd³)
C: 1 800 kg/m³ (3 100 lb/yd³)
B: 1 500 kg/m³ (2 500 lb/yd³)
A: 1 200 kg/m³ (2 000 lb/yd³)
X : Not recommended

LIFTING CAPACITY EC360F L

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		1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		Max. reach		Max.
			Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	m
Boom : 6.45 m Arm : 3.2 m Shoe : 600 mm CWT : 7 250 kg	7.5 m	kg									*8 190	7 620			*7 130	*7 130	7.7 m
	6 m	kg									*8 300	7 550			*6 940	6 030	8.5 m
	4.5 m	kg					*12 640	*12 640	*10 190	*10 190	*8 970	7 320	*7 670	5 410	*7 010	5 340	9.1 m
	3 m	kg					*16 250	14 830	*11 920	9 750	*9 870	7 010	8 210	5 280	*7 300	4 970	9.3 m
	1.5 m	kg					*18 890	13 870	*13 450	9 230	10 620	6 730	8 060	5 140	7 600	4 850	9.4 m
	0 m	kg					*19 900	13 460	*14 400	8 900	10 390	6 520	7 960	5 050	7 800	4 950	9.1 m
	-1.5 m	kg			*13 980	*13 980	*19 670	13 380	14 430	8 770	10 290	6 430			8 430	5 330	8.6 m
	-3 m	kg	*16 290	*16 290	*22 120	*22 120	*18 400	13 520	*13 900	8 820	10 360	6 500			9 780	6 160	7.8 m
	-4.5 m	kg			*21 300	*21 300	*15 730	13 870	*11 760	9 080					*10 310	8 050	6.6 m
Boom : 6.2 m Arm : 2.6 m Shoe : 600 mm CWT : 7 250 kg	7.5 m	kg							*9 400	*9 400					*9 530	8 970	6.7 m
	6 m	kg							*9 840	*9 840	*9 380	7 360			*9 390	7 050	7.7 m
	4.5 m	kg					*13 910	*13 910	*11 080	10 170	*9 760	7 180			9 450	6 100	8.3 m
	3 m	kg					*17 280	14 490	*12 630	9 590	*10 480	6 910			8 780	5 630	8.6 m
	1.5 m	kg					*19 440	13 640	*13 930	9 110	10 540	6 660			8 610	5 480	8.6 m
	0 m	kg					*19 890	13 350	14 510	8 830	10 360	6 500			8 910	5 640	8.3 m
	-1.5 m	kg			*16 550	*16 550	*19 150	13 370	*14 390	8 760	10 340	6 480			9 820	6 180	7.8 m
	-3 m	kg			*22 970	*22 970	*17 230	13 600	*13 040	8 910					*10 840	7 450	6.9 m
	-4.5 m	kg			*17 390	*17 390	*13 190	*13 190							*10 560	*10 560	5.4 m

Notes: 1. Machine in “Fine Mode-F” (Power Boost) for lifting capacities. 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards. 3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. 4. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.

Equipment

STANDARD AND OPTIONAL EQUIPMENT	
• = Standard / o = Optional	
Engine	
Turbocharged, 4 stroke diesel engine with water cooling, direct injection and charged air cooler that meets T3 requirements	•
Cooling system by Direct Fan	•
Cooling system by Hydraulic Fan	o
Air filter, High efficiency	o
Air intake heater	•
Cyclone pre-cleaner	•
Fuel shut off valve	•
Engine block heater	o
Coolant heater by diesel	o
Precleaner, oil bath	o
Delayed engine Shutdown	•
Automatic engine shutdown	•
Water separator with heater	o
Fuel filter and water separator	•
Electric / electronic control system	
Anti-theft with code lock system	•
Automatic idling system	•
Standard light	•
Extra light	o
Master electrical disconnect switch	•
Engine restart prevention circuit	•
Undercarriage and structures	
3-point side access	•
Guardrail, fixed / foldable	o
Lower frame, LC	o
Lower frame, STD	o
Link 600 / 700 / 800 mm triple grouser shoe	o
Link 600 mm triple grouser shoe, HD	o
Link 600 mm double grouser shoe	o
Dual toolbox	•
Undercover STD / HD	o
Hydraulic system	
EH (Electro-Hydraulic) control system	•
One touch power boost	•
Priority Adjustment	•
Boom down speed control	•
Shock reduction function	•
Joystick, Semi-long / 4 switch / 4 switch & 1 proportional / Simple L8 / L8	o
Hydraulic oil mineral 32 / 46 / 68	o
Longlife hyd oil mineral 32 / 46 / 68	o
Pattern change	•
Boom float function	o
Comfort driving control	o
Dedicated drain line	o
Hose rupture valve for boom	o
Hose rupture valve for arm	o

STANDARD AND OPTIONAL EQUIPMENT	
• = Standard / o = Optional	
Machine control technology	
Kinematic sensor package	o
Volvo Co-Pilot 2nd display, 12.8" touchable Full HD	o
Dig Assist, Start	o
Dig Assist, 2D	o
Dig Assist, In-Field Design	o
Dig Assist, Topcon 3D-MC	o
Dig Assist, Infield-Design Advanced	o
Dig Assist, On-Board Weighing	o
Dig Assist, Laser Receiver	o
Volvo Active Control	o
Dig Assist, Boundary Limit	o
Cab and interior	
ROPS certified cab	•
FOG (Falling Object Guard)	o
FOPS (Falling Object Protection Structure)	o
8" HD display	•
Mechanical sus/Air sus seat	o
Seat belt, 2 inch 2 point / 3 inch 2 point / 3 inch 3 point	o
Front rain shield	o
Sun screens, front, roof, rear	•
Lower wiper	o
Sun shield, roof hatch	o
Safety net	o
Travel pedals and hand levers	•
Adjustable operator seat and joystick control console	•
Heater & air-conditioner, automatic	•
air-conditioner, automatic	o
AM/FM/USB/Bluetooth stereo with Keypad	•
Large storage area	•
Pull-up type front window	•
Removable lower windshield	•
Digging equipment	
Boom: 6.45 m monoblock	o
Boom: 6.2 m monoblock	o
Arm: 3.2 m	o
Arm: 2.6 m	o
Safety and security	
Travel alarm, beep / white noise	o
Flashing beacon, LED	o
Rear view camera	o
Side view camera	o
HD VSV (Volvo Smart View)	o
Service and maintenance	
Swing out A/C condenser	•
Fuel filler pump	o
Jump start connector	o
Tool kit	o

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
EC360

Volvo Smart View

Volvo Smart View with Obstacle Detection provides operators with a 360° view of the machines surroundings thanks to the camera and the new radar detection system. This high technology can identify obstacles as either an object or a human being, allowing the operator to take appropriate action.



Stay connected

In the comfort of the new cab, you can charge your mobile phone wirelessly or plugged in. You also have the option to use USB connections to access your music playlists or podcasts. The Bluetooth speaker enables you to have clear communication when making a phone call.

Comfort

The new style cab's ambition is to being more comfortable and make your work easier. A handy storage space allows you to store your coolbox or shoes while you work. You will enjoy reduced noise levels, built-in sunscreen and improved HVAC. Moreover, the new comfortable seat offer will allow to reduce the operator fatigue when working all day.

Fuel efficiency

In the new Volvo excavators our improved electro-hydraulic system reduces your fuel consumption dramatically. It is done by regulating engine speed and hydraulic flow rate based on the task at hand. This ensures that only the necessary amount of energy is used, leading to improved fuel efficiency and lower operating costs.

Outstanding cooling performance

The EC360 is equipped with a smart cooling system that consists of electric and hydraulic fans. It automatically adjusts fan speed according to engine coolant temperature and hydraulic workload. This minimizes unnecessary energy consumption and improves overall fuel efficiency.
By reducing engine load and preventing overheating, the system ensures optimum excavator performance, extends component life and lowers operating costs.

New electro-hydraulic system

At the heart of the fuel efficiency improvements is the new electro-hydraulic system with enhanced main control valve (MCV). This intelligent technology uses electronic sensors to monitor the operator's movements and send signals to the machine's on-board computer (ECU) which processes the information and sends commands to the main control valve. The result is smooth and precise movement of the excavator's boom, bucket, and other hydraulic functions allowing for more accurate digging and loading.



Dig Assist

A must-have on the modern construction site, Dig Assist provides unrivalled machine guidance and control technology, enabling operators to work with the highest levels of precision and accuracy.
The addition of On-Board Weighing provides real-time insights into the bucket's load, helping to eliminate over-loading, underloading, reweighing and waiting times.

Productivity

Advanced electric control joystick and full electric travel pedals provide lightning-fast response times. Boom/Swing priority functions help operators work with speed and ease by prioritizing one function over another, improving cycle times.

Serviceability

Minimizing downtime is key to protect your total cost of ownership. Easy access, clean and quick oil changes, as well as 1 000-hour intervals for engine oil, oil and fuel filter further increase your machine availability. Swing out condenser also makes cleaning of the radiator and oil cooler more convenient.

