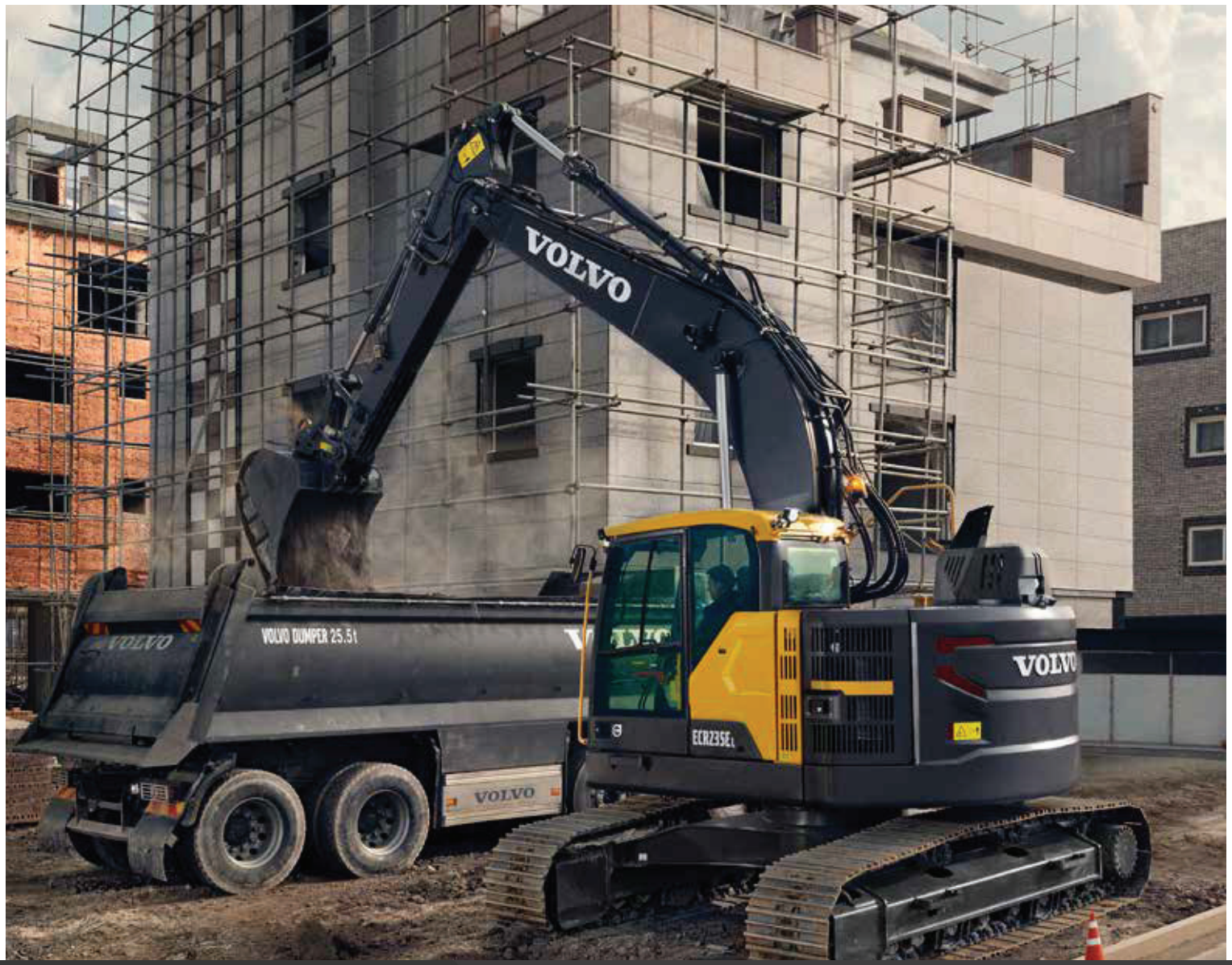
Volvo Construction Equipment
Building Tomorrow

ECR145E, ECR235E

Volvo Excavators 14.4-16.7 t / 31,770-36,790lb 121 hp I 23.7-27.9 t / 52,250-61,440 lb 173hp



Rev 06-24

A passion for performance

At Volvo Construction Equipment, we're not just coming along for the ride. Developing products and services that raise productivity – we are confident we can lower costs and increase profits for customers around the globe. Part of the Volvo Group, we are passionate about innovative solutions to help you work smarter – not harder.

Helping you to do more

Doing more with less is a trademark of Volvo Construction Equipment. High productivity has long been married to low energy consumption, ease of use and durability. When it comes to lowering life-cycle costs, Volvo is in a class of its own.

Designed to fit your needs

There is a lot riding on creating solutions that are suited to the particular needs of different industry applications. Innovation often involves high technology – but it doesn't always have to. Some of our best ideas have been simple, based on a clear and deep understanding of our customers' working lives.

You learn a lot in 180 years

Over the years, Volvo has advanced solutions that have revolutionized the use of construction equipment. No other name speaks Safety louder than Volvo. Protecting operators, those around them and minimizing our environmental impact are traditional values that continue to shape our product design philosophy.

We're on your side

We back the Volvo brand with the best people. Volvo is truly a global enterprise, one that is on standby to support customers quickly and efficiently – wherever they are.

We have a passion for performance.

A strong, dedicated, capable dealer network

Our dealers are strategically located throughout North America to provide the equipment you need and the parts and service support you demand for a productive and profitable operation.

The strength of our dealer network is enhanced with extensive individualized product support training at our best-in-class Customer Center in Shippensburg and through hands-on training. Using a great Product Demonstration Center featuring a dedicated area for most commons applications, visitors operate equipment from our entire product line under a variety of simulated working conditions. This facility is in year-round use by our dealers and customers.

Building the best starts right here.

The products designed and manufactured by Volvo Construction Equipment have their beginnings at the most advanced Research & Design centers in the industry. Volvo CE machines are designed in 11 R&D centers and produced in 15 manufacturing facilities across the world.

The major R&D center and manufacturing plant in the Americas is located in Shippensburg, Pennsylvania. This facility has been in operation for over 30 years and – with its recently added 200,000 sq. ft. expansion – now covers 570,000 sq. ft. on an 80 acre campus. Dedicated work teams and highly advanced technologies and techniques using the Volvo Production System ensure continuous quality improvements, labor savings and cost control to reach the high quality that our customers have come to expect from Volvo.

Confined space, big potential

The optimized compact design of the ECR145E/ECR235E offers a short swing radius for operating in confined spaces without compromising on performance. The machine's Tier 4 Final engine and enhanced hydraulics system results in smoother operation and increased productivity.

Tractive force

For more power and better productivity, the machine's system design – specific to the ECR145E/ECR235E – and durable under carriage ensure impressive tractive force when climbing gradients and traveling over rough or soft terrain.

Tier 4 Final engine

Featuring proven advanced technology, and built on decades of experience, Volvo's robust Tier 4 Final engine boasts more power - while reducing both fuel consumption and emissions to deliver superior quality, reliability and durability.

Working mode

Volvo's integrated working mode system, which now includes the G4 mode, optimizes fuel efficiency, reduces running costs, increases productivity and performance. Choose the best work mode for the task at hand – select from I (idle), F (fine), G (general) and H (heavy).

Faster cycle time

Do more in less time as the enhanced hydraulics system increases pump power for faster and smoother operation, resulting in quicker cycle times and higher productivity.

Sight, space and sound

Operate in a comfortable, low noise environment to increase efficiency and reduce operator fatigue. The larger ROPS certified cab has a wider entrance for easier access, more legroom and a more spacious interior, while the responsive climate control system provides a comfortable working environment.

Climate control system

For easier controllability and operator comfort the machine features an improved climate control system displayed on the 8" LCD monitor. The industry-leading air circulation and defrosting system speeds up the heating and cooling of the cab for a more comfortable environment.

Better visibility

For a clear view of your job site, the cab's slim pillars and large expanses of glass result in excellent all-round visibility. Well positioned and a longer vertical windshield wiper provides the best possible coverage of the front window for comfortable and accurate operating.

Keypad

The keypad allows the operator to navigate through different settings on the 8" LCD monitor and activate machine functions in a safe and comfortable way. The functionality of the camera, air conditioning and lights can be customized through the keypad and configurations can be saved for added convenience. Bluetooth and a hands-free function have also been added so the operator can connect to wireless functions.

Shortcut button

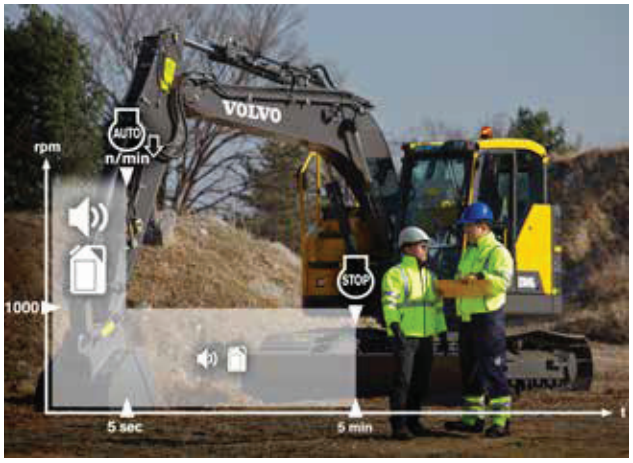
The windshield wipers, camera, and audio mute function can be assigned to a shortcut button located on the joystick, so the operator can control the selected function by simply pressing a button.

Own it all

Secure more profit and reduce your Total Cost of Ownership by lowering fuel consumption and increasing uptime with the ECR145E/ECR235E short swing radius excavator. The winning combination of an enhanced hydraulics system with fully electronic control system, improved ECO mode, convenient service access and easy maintenance, all contribute to lower costs and higher productivity.

Auto idle and engine shutdown

Engine speed is reduced to idle when the controls are inactive for a pre-set amount of time between 3-20 seconds – reducing fuel consumption and noise. If the machine is left idle for longer, the optional auto engine shutdown feature will automatically turn off the machine.



ECO mode

For better fuel efficiency without sacrificing performance and power in most operating conditions, Volvo's unique and intelligent ECO mode optimizes the hydraulic system to reduce flow and pressure losses in order to reduce fuel consumption. ECO mode is automatically selected but can be switched off via the keypad.

Safer access

The machine features well-positioned punched anti-slip plates, handrails and foldable guardrails* for superior grip and added safety. The design facilitates easy inspection and maintenance to promote safety. *ECR235E only

Easy service access

To increase the longevity of your machine, it's important to carry out regular service checks. Volvo has grouped filters and centralized greasing points, which are accessible from the ground for easy access. Maximize machine uptime and avoid any unwanted costs.

Volvo ECR145E, ECR235E in detail

Engine

The latest generation, Volvo engine Tier 4f emissions compliant diesel engine fully meets the demands of the latest, emsissions regulations. Featuring Volvo Advanced Combustion Technology (V-ACT), it is designed to deliver superior performance and fuel efficiency. The engine uses precise, high pressure fuel injectors, turbo charger and air-to-air intercooler, and electronic engine controls to optimize machine performance.
Air Filter: 3-stage with precleaner
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.

ECR145E

Engine		Volvo		D4J
Max power at	r/s / r/min			33 / 2,000
Net, ISO 9249/SAE J1349	kW	hp	89	119
Gross, ISO 14396/SAE J1995	kW	hp	90	121
Max torque	Nm	lbf ft	566	417
at engine speed	r/s / r/min			1,500
No. of cylinders				4
Displacement	l	in^3	4.0	244
Bore	mm	in	101	3.98
Stroke	mm	in	126	4.96

ECR235E

Engine		Volvo		D6J
Max power at	r/s / r/min			30 / 1,800
Net, ISO 9249/SAE J1349	kW	hp	128	172
Gross, ISO 14396/SAE J1995	kW	hp	129	173
Max torque	Nm	lbf ft	850	627
at engine speed	r/s / r/min			1,350
No. of cylinders				6
Displacement	l	in^3	5.7	348
Bore	mm	in	98	3.86
Stroke	mm	in	126	4.96

Electrical system		**ECR145E**	**ECR235E**
Well protected high-capacity electrical system. Waterproof double-lock harness plugs are used to secure corrosion-free connections. The main relays and solenoid valves are shielded to prevent damage. The master switch is standard. Contronics provides advanced monitoring of machine functions and important diagnostic information.			
Voltage	V	24	24
Batteries	V / Ah	2 x 12 / 100	2 x 12 / 150
Alternator	V / Ah	28 / 110	28 / 110
Start motor	V / kW	24 x 5.5	24 x 5.5

Swing system			**ECR145E**		**ECR235E**	
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		12.7		12
Max. slew torque	kNm	lbf ft	41.9	30,910	83.0	61,220

Drive			**ECR145E**		**ECR235E**	
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	lbf	119	26,760	208.9	46,970
Max. travel speed	km/h	mph	3.0/5.5	1.9/3.4	3.0/5.5	1.9/3.4
Gradeability		°		35		35

Undercarriage			**ECR145E**		**ECR235E**	
Robust X-shaped frame with greased and sealed track chains as standard.						
Track shoe				2 x 46		2 x 49
Link pitch	mm	in	171	6.8	190	7.5
Shoe width, triple grouser	mm	in	500/ 600/ 750	20/ 24/ 30	600/ 700/ 800/ 900	24/ 28/ 32/ 36
Shoe width, triple grouser, HD	mm	in	600/ 700	24/ 28	600	24
Shoe width, double grouser	mm	in	-	-	700	28
Shoe width, rubber grouser	mm	in	500	20	600	24
Bottom rollers				2 x 7		2 x 8
Top rollers				2 x 1		2 x 2

Hydraulic system

The hydraulics system, combined with the fully electronic control system and advanced ECO mode, has been optimized to work in harmony with engine to match the engine power, reduce power loss and improve controllability and response time.
The following important functions are included in the system:
Summation system: Combines the flow of both hydraulic pumps to ensure quick cycle times and high productivity.
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

			ECR145E		ECR235E	
Maximum flow	l/min	gpm	2 x 124	2 X 33	2 x 207	2 x 55

Pilot pump, Type Gear pump

Maximum flow	l/min	gpm	1 x 20	1 x 5	1 x 18	1 x 5

Relief valve setting:

Implement	MPa	psi	32.4 / 34.3	4,690 / 4,980	34.3 / 36.3	4,980 / 5,260
Travel circuit	MPa	psi	34.3	4,980	34.3	4,980
Slew circuit	MPa	psi	26.5	3,840	27.9	4,050
Pilot circuit	MPa	psi	3.9	570	3.9	570

Hydraulic motors

Travel: Variable displacement axial piston motor with mechanical brake
Slew: Fixed displacement axial piston motor with mechanical brake

Hydraulic cylinders			ECR145E		ECR235E	
Mono boom			2		2	
Bore x Stroke	ø x mm	ø x in	105 x 1 055	4.1 x 41.5	130 x 1 420	5.1 x 55.9
1st boom of 2 piece boom			2		2	
Bore x Stroke	ø x mm	ø x in	110 x 980	4.3 x 38.6	130 x 1 345	5.1 x 53.0
2nd boom of 2 piece boom			1		1	
Bore x Stroke	ø x mm	ø x in	160 x 765	6.3 x 30.1	160 x 1 070	6.3 x 42.1
Arm			1		1	
Bore x Stroke	ø x mm	ø x in	120 x 1 028	4.7 x 40.5	135 x 1 520	5.3 x 59.8
Bucket			1		1	
Bore x Stroke	ø x mm	ø x in	100 x 865	3.9 x 34.1	120 x 1 065	4.7 x 41.9
Dozer blade			2		2	
Bore x Stroke	ø x mm	ø x in	130 x 270	5.1 x 10.6	140 x 320	5.5 x 12.6

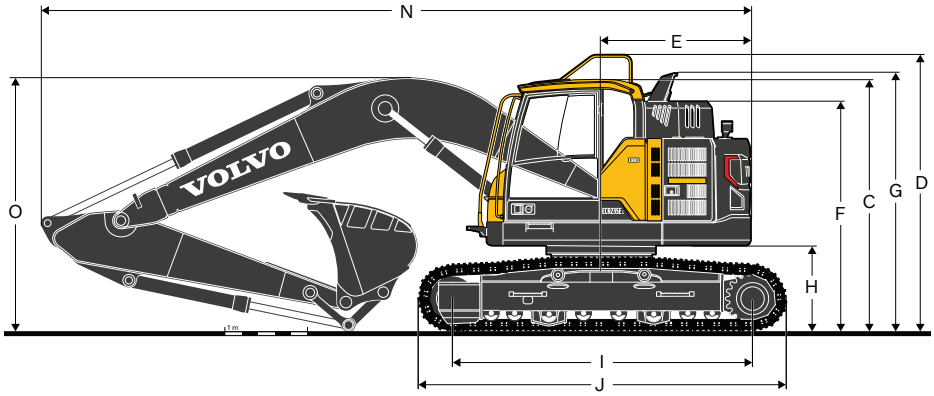
Service refill capacities			ECR145E		ECR235E	
Fuel tank	l	gal	200	53	286	76
Hydraulic system, total	l	gal	200	53	280	74
Hydraulic tank	l	gal	59	16	126	33
AdBlue tank	l	gal	15.5	4	24.9	7
Engine oil	l	gal	15.5	4	25	7
Engine coolant	l	gal	26	7	30	8
Swing reduction unit	l	gal	3.9	1	7	2
Travel reduction unit	l	gal	2 x 2.2	2 x 1	2 x 5	2 x 1

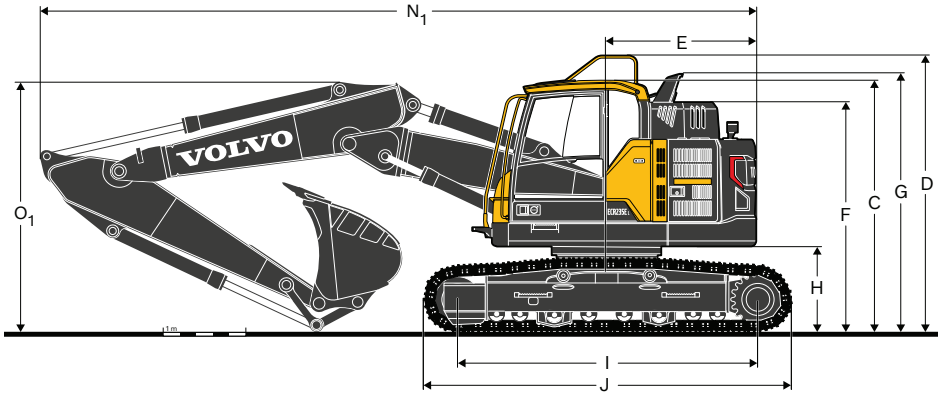
Cab

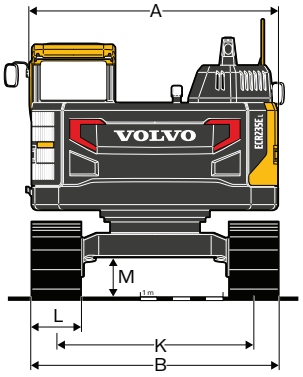
The operator's cab has easy access via a wide door opening. The cab is supported on hydraulic dampening mounts to reduce shock and vibration levels. These along with sound absorbing lining provide low noise levels. The cab has excellent all-round visibility. The front windshield can easily slide up into 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		ECR145E	ECR235E
Sound pressure level in cab according to ISO 6396			
L_{pA} (standard)	dB	71	71
L_{pA} (tropical)	dB	72	72
External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC			
L_{WA} (standard)	dB	97	101
L_{WA} (tropical)	dB	98	102

Specifications



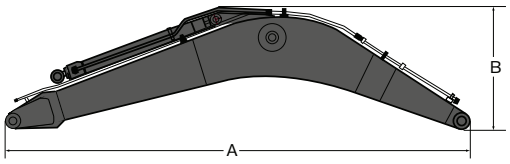


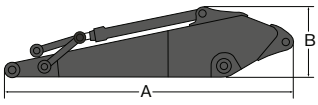


Description		Unit		ECR145EL						ECR235EL			
Boom		m, ft in		4.6, 15'1" mono and 4.72, 15'6" 2-piece						5.7, 18'8" mono and 5.76, 18'11" 2-piece			
Arm		m	ft in	2.1	6'11"	2.5	8'2"	3.0	9'10"	2.5	8'2"	2.9	9'6"
A	Overall width of upper structure	mm	ft in	2 490	8'2"	2 490	8'2"	2 490	8'2"	2 990	9'10"	2 990	9'10"
B	Overall width	mm	ft in	2 690	8'10"	2 690	8'10"	2 690	8'10"	3 090	10'2"	3 090	10'2"
C	Overall height of cab	mm	ft in	2 895	9'6"	2 895	9'6"	2 895	9'6"	2 965	9'9"	2 965	9'9"
D	Overall height of guardrail(unfolded)	mm	ft in	3 075	10'1"	3 075	10'1"	3 075	10'1"	3 365	11'0"	3 365	11'0"
D'	Overall height of guardrail(folded)	mm	ft in	-	-	-	-	-	-	2 925	9'7"	2 925	9'7"
E	Tail swing radius	mm	ft in	1 494	4'11"	1 494	4'11"	1 494	4'11"	1 810	5'11"	1 810	5'11"
F	Overall height of engine hood	mm	ft in	2 545	8'4"	2 545	8'4"	2 545	8'4"	2 780	9'1"	2 780	9'1"
G	Overall height of diffuser	mm	ft in	2 775	9'1"	2 775	9'1"	2 775	9'1"	3 035	9'11"	3 035	9'11"
H	Counterweight clearance *	mm	ft in	900	2'11"	900	2'11"	900	2'11"	1 025	3'4"	1 025	3'4"
I	Tumbler length	mm	ft in	3 040	10'0"	3 040	10'0"	3 040	10'0"	3 660	12'0"	3 660	12'0"
J	Track length	mm	ft in	3 750	12'4"	3 750	12'4"	3 750	12'4"	4 460	14'8"	4 460	14'8"
K	Track gauge	mm	ft in	1 990	6'6"	1 990	6'6"	1 990	6'6"	2 390	7'10"	2 390	7'10"
L	Shoe width	mm	ft in	700	2'4"	700	2'4"	700	2'4"	700	2'4"	700	2'4"
M	Min. ground clearance *	mm	ft in	430	1'5"	430	1'5"	430	1'5"	460	1'6"	460	1'6"
N	Overall length	mm	ft in	7 400	24'3"	7 405	24'4"	7 345	24'1"	9 070	29'9"	9 010	29'7"
N_1	Overall length	mm	ft in	7 505	24'7"	7 470	24'6"	7 370	24'2"	9 090	29'10"	9 065	29'9"
O	Overall height of boom	mm	ft in	2 760	9'1"	2 900	9'6"	3 250	10'8"	3 330	10'11"	3 190	10'6"
O_1	Overall height of boom	mm	ft in	2 710	8'11"	2 910	9'7"	3 470	11'5"	3 060	10'0"	3 030	9'11"

* Without shoe grouser.

$_1$ 2-piece boom





ECR145E

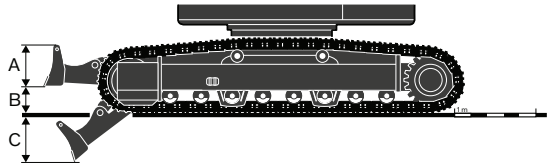
Description		Unit		mono		2-piece		Description		Unit							
Boom		**m**	**ft in**	**4.6**	**15'1"**	**4.72**	**15'6"**	**Arm**		**m**	**ft in**	**2.1**	**6'11"**	**2.5**	**8'2"**	**3.0**	**9'10"**
A	Length	mm	ft in	4 770	15'8"	4 885	16'0"	A	Length	mm	ft in	2790	9'2"	3195	10'6"	3690	12'1"
B	Height	mm	ft in	1370	4'6"	1 135	3'9"	B	Height	mm	ft in	680	2'3"	675	2'3"	750	2'6"
Width		mm	ft in	545	1'9"	545	1'9"	Width		mm	ft in	275	0'11"	275	0'11"	275	0'11"
Weight		kg	lb	1 130	2,490	1 450	3,200	Weight		kg	lb	560	1,230	624	1,380	684	1,510

ECR235E

Description		Unit		mono		2-piece		Description		Unit					
Boom		**m**	**ft in**	**5.7**	**18'8"**	**5.76**	**18'11"**	**Arm**		**m**	**ft in**	**2.5**	**8'2"**	**2.9**	**9'6"**
A	Length	mm	ft in	5 910	19'5"	5 965	19'7"	A	Length	mm	ft in	3 525	11'7"	3 910	12'10"
B	Height	mm	ft in	1 770	5'10"	1 300	4'3"	B	Height	mm	ft in	860	2'10"	860	2'10"
Width		mm	ft in	670	2'2"	670	2'2"	Width		mm	ft in	440	1'5"	440	1'5"
Weight		kg	lb	2 000	4,410	2 570	5,670	Weight		kg	lb	975	2,150	1 000	2,200

* Includes cylinder, piping and pin, excludes boom cyl. Pin

* Includes cylinder, linkage and pin

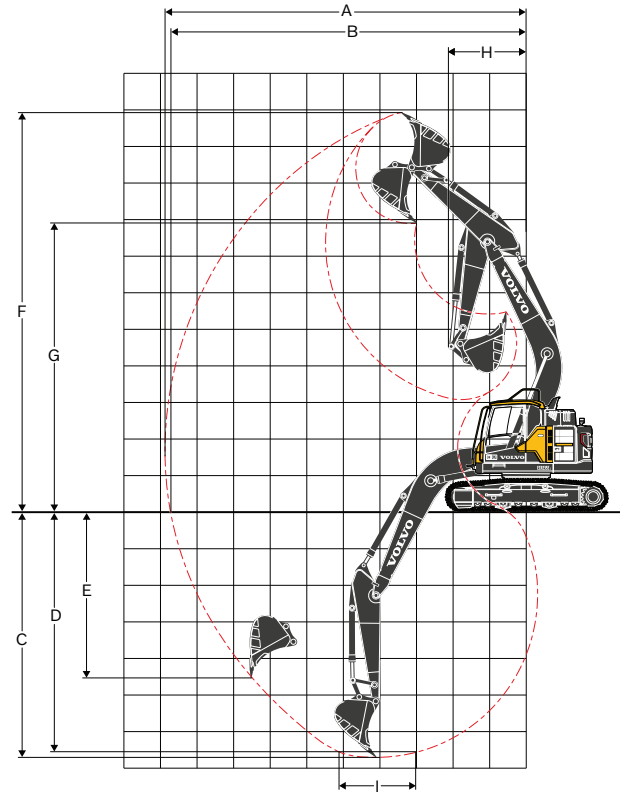


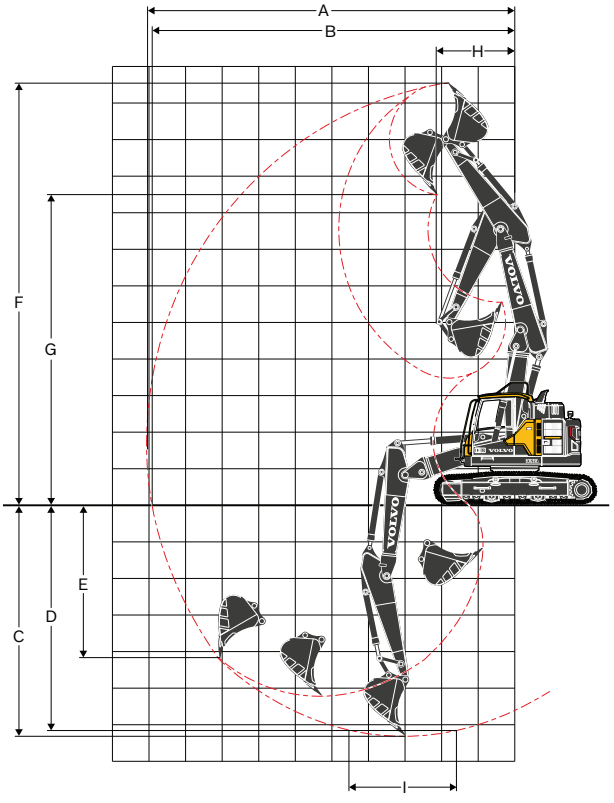
Front dozer blade

Description		Unit		ECR145E		ECR235E	
A	Height	mm	ft in	585	1'11"	600	2'0"
Width 500mm / 20" shoe		mm	ft in	2 490	8'2"	-	-
Width 600mm / 24" shoe		mm	ft in	2 590	8'6"	2 990	9'10"
Width 700mm / 28" shoe		mm	ft in	2 690	8'10"	3 090	10'2"
Width 800mm / 32" shoe		mm	ft in	-	-	3 190	10'6"
Weight		kg	lb	460	1,010	790	1,740
B	Lift height	mm	ft in	478	1'7"	610	2'0"
C	Digging depth	mm	ft in	601	2'0"	480	1'7"

Specifications

WORKING RANGES





WORKING RANGES

Description			Unit		ECR145E											
Boom			m, ft in		4.6 / 15'1" mono						4.72 / 15'6" 2-piece					
Arm			m	ft in	2.1	6'11"	2.5	8'2"	3.0	9'10"	2.1	6'11"	2.5	8'2"	3.0	9'10"
A	Max. digging reach		mm	ft in	7 990	26'3"	8 360	27'5"	8 850	29'0"	8 220	27'0"	8 610	28'3"	9 100	29'10"
B	Max. digging reach on ground		mm	ft in	7 840	25'9"	8 215	26'11"	8 720	28'7"	8 070	26'6"	8 465	27'9"	8 970	29'5"
C	Max. digging depth		mm	ft in	5 130	16'10"	5 530	18'2"	6 030	19'9"	5 235	17'2"	5 640	18'6"	6 145	20'2"
D	Max. digging depth (l = 2.44m level)		mm	ft in	4 880	16'0"	5 310	17'5"	5 850	19'2"	5 115	16'9"	5 525	18'2"	6 040	19'10"
E	Max. vertical wall digging depth		mm	ft in	3 954	13'0"	4 325	14'2"	4 855	15'11"	4 155	13'8"	4 523	14'10"	5 015	16'5"
F	Max. cutting height		mm	ft in	9 090	29'10"	9 415	30'11"	9 860	32'4"	9 380	30'9"	9 740	31'11"	10 205	33'6"
G	Max. dumping height		mm	ft in	6 550	21'6"	6 875	22'7"	7 310	24'0"	6 830	22'5"	7 190	23'7"	7 660	25'2"
H	Min. front swing radius		mm	ft in	1 929	6'4"	2 130	7'0"	2 505	8'3"	2 330	7'8"	2 590	8'6"	3 010	9'11"
DIGGING FORCES WITH DIRECT FIT BUCKET																
Bucket radius			mm	ft in	1274	4'2"	1274	4'2"	1274	4'2"	1274	4'2"	1274	4'2"	1274	4'2"
Breakout force - bucket	Normal	SAE J1179	kN	lb	80.5	18,100	80.5	18,100	80.5	18,100	80.5	18,100	80.5	18,100	80.5	18,100
	Power boost	SAE J1179	kN	lb	85.4	19,200	85.4	19,200	85.4	19,200	85.4	19,200	85.4	19,200	85.4	19,200
	Normal	ISO 6015	kN	lb	91.1	20,480	91.1	20,480	91.1	20,480	91.1	20,480	91.1	20,480	91.1	20,480
	Power boost	ISO 6015	kN	lb	96.6	21,720	96.6	21,720	96.6	21,720	96.6	21,720	96.6	21,720	96.6	21,720
Tearout force - dipper arm	Normal	SAE J1179	kN	lb	69.5	15,630	62.1	13,950	55.3	12,430	69.5	15,630	62.1	13,950	55.3	12,430
	Power boost	SAE J1179	kN	lb	73.8	16,580	65.8	14,800	58.6	13,180	73.8	16,580	65.8	14,800	58.6	13,180
	Normal	ISO 6015	kN	lb	71.4	16,060	63.5	14,280	56.3	12,670	71.4	16,060	63.5	14,280	56.3	12,670
	Power boost	ISO 6015	kN	lb	75.8	17,030	67.3	15,140	59.8	13,430	75.8	17,030	67.3	15,140	59.8	13,430
Rotation angle, bucket			°		175		175		175		175		175		175	

Description			Unit		ECR235E							
Boom			m, ft in		5.7 / 18'8" mono				5.76 / 18'11" 2-piece			
Arm			m	ft in	2.5	8'2"	2.9	9'6"	2.5	8'2"	2.9	9'6"
A	Max. digging reach		mm	ft in	9 510	31'2"	9 890	32'5"	9 690	31'9"	10 085	33'1"
B	Max. digging reach on ground		mm	ft in	9 340	30'8"	9 735	31'11"	9 660	31'8"	9 930	32'7"
C	Max. digging depth		mm	ft in	6 350	20'10"	6 755	22'2"	5 950	19'6"	6 355	20'10"
D	Max. digging depth (l = 2.44m level)		mm	ft in	6 120	20'1"	6 550	21'6"	5 840	19'2"	6 250	20'6"
E	Max. vertical wall digging depth		mm	ft in	5 220	17'2"	5 685	18'8"	4 910	16'1"	5 325	17'6"
F	Max. cutting height		mm	ft in	10 600	34'9"	10 915	35'10"	11 150	36'7"	11 515	37'9"
G	Max. dumping height		mm	ft in	7 560	24'10"	7 870	25'10"	8 095	26'7"	8 460	27'9"
H	Min. front swing radius		mm	ft in	2 395	7'10"	2 170	7'1"	2 235	7'4"	2 160	7'1"
DIGGING FORCES WITH DIRECT FIT BUCKET												
Bucket radius			mm	ft in	1 528	5'0"	1 528	5'0"	1 528	5'0"	1528	5'0"
Breakout force - bucket	Normal	SAE J1179	kN	lb	125.0	28,090	125.0	28,100	125.0	28,090	125.0	28,100
	Power boost	SAE J1179	kN	lb	132.1	29,700	132.2	29,710	132.1	29,700	132.2	29,710
	Normal	ISO 6015	kN	lb	141.3	31,760	141.3	31,770	141.3	31,760	141.3	31,770
	Power boost	ISO 6015	kN	lb	149.4	33,580	149.4	33,590	149.4	33,580	149.4	33,590
Tearout force - dipper arm	Normal	SAE J1179	kN	lb	117.2	26,350	101.3	22,780	117.2	26,350	101.3	22,780
	Power boost	SAE J1179	kN	lb	123.9	27,860	107.1	24,080	123.9	27,860	107.1	24,080
	Normal	ISO 6015	kN	lb	120.7	27,130	103.9	23,360	120.7	27,130	103.9	23,360
	Power boost	ISO 6015	kN	lb	127.6	28,680	109.9	24,700	127.6	28,680	109.9	24,700
Rotation angle, bucket			°		175		175		175		175	

Equipment

STANDARD EQUIPMENT

	ECR145E	ECR235E
Engine		
Turbocharged, 4 stroke diesel engine with water cooling, direct injection and charged air cooler that meets Tier 4f requirements	•	•
Air filter with indicator	•	•
Air intake heater	•	•
Electric engine shut-off	•	•
Fuel filter and water separator	•	•
Standard cooling system	•	•
Fuel filler pump: 30l/min / 7.9gpm with auto stop	•	•
Alternator, 110 A	•	•
Electric/Electronic control system		
Contronics		
Advanced mode control system	•	•
Self-diagnostic system	•	•
Machine status indication	•	•
Satellite Caretrack and 3yr-Caretrack subscription	•	•
Engine speed sensing power control	•	•
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 or LED lights:		
Halogen		
Frame-mounted: 1, Boom-mounted: 2	•	•
LED		
Frame-mounted: 1, Boom-mounted: 2	•	•
Batteries, 2 x 12 V / 100 Ah	•	
Batteries, 2 x 12 V / 150 Ah		•
Start motor, 24 V / 5.5 kW	•	•
Hydraulic system		
Automatic sensing hydraulic system		
Summation system	•	•
Boom priority	•	•
Arm 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	•	•
Boom cylinders (x2)	•	•
Cylinder cushioning	•	•
Cylinder contamination seals	•	•
Auxiliary hydraulic valve	•	•
Automatic two-speed travel motors	•	•
Hydraulic oil, longlife oil 46	•	•
Frame		
Access way with handrail	•	•
Tool storage area	•	•
Punched metal anti-slip plates	•	•
Under cover (heavy duty)	•	•
3 200kg / 7,060lb counterweight	•	
6 200kg / 13,670lb counterweight		•

	ECR145E	ECR235E
Cab and interior		
ROPS (ISO12117-2) certified cab with openable roof hatch	•	•
Silicon oil and rubber mounts with spring	•	•
Control lock out lever	•	•
Travel pedals and hand levers	•	•
Adjustable operator seat with heater and joystick control console	•	•
Control joysticks with 4 switches each	•	•
Heater & air-conditioner, automatic	•	•
Flexible antenna	•	•
Radio with AUX, USB Jack and Bluetooth	•	•
Cab, all-weather sound suppressed, includes:		
Cup holders	•	•
Door locks	•	•
Tinted glass	•	•
Floor mat	•	•
Horn	•	•
Large storage area	•	•
Pull-up type front window	•	•
Removable lower windshield	•	•
Seat belt	•	•
Safety glass	•	•
Sun screens, front, roof, rear	•	•
Windshield wiper with intermittent feature	•	•
Rear view camera	•	•
Straight travel pedal	•	•
Master key	•	•
Undercarriage		
Under cover	•	•
Hydraulic track adjusters	•	•
Greased and sealed track link	•	•
Track Guard	•	•
Digging equipment		
4.6m / 15'1" mono boom	•	
5.7m / 18'8" mono boom		•
2.5m / 8'2" arm	•	
2.9m / 9'6" arm		•
Linkage	•	•
Manual centralized lubrication	•	•
Service		
Tool kit, daily maintenance	•	•

OPTIONAL EQUIPMENT

	ECR145E	ECR235E
Engine		
Block heater: 120 V or 240 V	•	•
Diesel coolant heater, 5 kW	•	•
Water separator with heater	•	•
Auto engine shutdown	•	•
Tropical cooling system	•	•
Reversible cooling fan	•	•
Electric		
Extra work lights (Halogen or LED):		
Cab-mounted 2 (front 1, rear 1)	•	•
Counterweight-mounted 1	•	•
Anti-theft system	•	•
Rotating warning beacon	•	•
Hydraulic system		
Boom hose rupture valve with overload warning device	•	•
Arm hose rupture valve	•	•
Boom float function with HRV	•	•
Boom float function without HRV	•	•
Pilot control pattern change	•	•

OPTIONAL EQUIPMENT

	ECR145E	ECR235E
Hydraulic system		
Hydraulic piping:		
Work tool management system (up to 20 programmable memories)	•	•
Breaker & shear, 1 or 2 pump flow	•	•
Slope & rotator (40lpm / 11gpm or 60lpm / 16gpm)	•	•
Extra for slope & rotator	•	•
Grapple	•	•
Oil leak (drain) line	•	•
Quick coupler	•	•
Breaker & shear pressure pre-setting	•	•
Volvo hydraulic quick coupler S1 with hook / S1 without hook		•
Volvo hydraulic quick coupler S6 with hook / S6 without hook	•	
Volvo hydraulic quick coupler Universal U22		•
Volvo hydraulic quick coupler Universal U14	•	
Hydraulic oil, biodegradable 46	•	•
Hydraulic oil, ISO VG 46, 68	•	•
Hydraulic oil, longlife oil 32, 68	•	•
Cab and interior		
ROPS (ISO12117-2) certified cab with fixed hatch	•	•
Fabric seat without heater	•	•
Fabric seat with heater and air suspension	•	•
Control joysticks with semi-long	•	•
Control joysticks with 3 switch & 1 propotional	•	•

	ECR145E	ECR235E
Cab and interior		
Cab-mounted falling object guard (FOG)	•	•
Cab-mounted falling object protective structure (FOPS)	•	•
Anti-vandalism kit	•	•
Safety net for front window	•	•
Side view camera	•	•
Smoker kit (ashtray and lighter)	•	•
Sunlight protection, roof (steel)	•	•
Rain shield	•	•
Specific key	•	•
Undercarriage		
Dozer blade	•	•
500mm / 20", 600mm / 24", 600mm HD / 24" HD, 700mm HD / 28" HD, 750mm / 30" shoe with triple grousers	•	
500mm / 20" shoe with rubber grousers	•	
600mm / 24", 600mm HD / 24" HD, 700mm / 28", 800mm / 32", 900mm / 36" shoe with triple grousers		•
700mm / 28" shoe with double grousers		•
600mm / 24" shoe with rubber grousers		•
Full track guard		•
Digging equipment		
4.72m / 15'6" 2-piece boom	•	
5.76m / 18'11" 2-piece boom		•
2.1m/ 6'11", 3.0 m / 9'10"arm	•	
2.5 m / 8'2" arm		•
Linkage with lifting eye	•	•
Service		
Tool kit, compact	•	•

Selection of Volvo optional equipment

Side view camera

Anti-vandal kit

Safety net

LED lights

Dozer blade

Two piece boom

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