

V O L V O



Volvo Excavators 39.0-41.6 t 339 hp

# EC400

Volvo Construction Equipment

# EC400

A robust machine for the toughest of conditions,  
now even more fuel efficient and easier to service.



# Your solid and robust partner

With a strong and robust undercarriage, the EC400 is a perfect partner in quarries and on construction sites across the globe. Thanks to its solid structure it can handle tough conditions like those in a quarry but still enjoys improved fuel efficiency compared to previous models. Now even easier to service and with a comfortable modern cab, it is a machine that meets the requirements of anyone from owner to operator.



## Operator comfort

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



## Fuel Efficiency

- Up to 15% improvement
- Engine pump optimization with engine speeds as low as 1 600 rpm
- Smart MCV



## Smart View with Obstacle Detection

- Increased safety onsite and for the operator
- Radar warns for items outside the screen
- HD screen
- Human identifying alarm separate from other obstacles



## Productivity

- Volvo Active Control
- Dig Assist with On-Board Weighing
- Electro-hydraulic system
- Boom/Swing & Boom/Travel priority functions



## Serviceability

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



### Co-Pilot

The new Volvo Co-Pilot features a new 12.8" display with full HD resolution. Associated with the new HD side and rear camera, it gives better visibility on your operations. Both hardware and software improvements provide increased control on the Dig Assist applications.

### Smooth Control

You will find the new joystick controls offer smoother, easier operation. Because the controls are more precise, it is easier for you to achieve what you are trying to do, leading to better machine performance.

## 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 EC400 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 overloading, 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.



# Volvo EC400 in detail

## Engine

The next-generation Volvo diesel engine uses Volvo Advanced Combustion Technology (V-ACT) to deliver lower emissions, superior performance and fuel efficiency. The engine uses precise, high pressure fuel injectors, turbo charger and intercooler, and electronic engine controls to optimize machine performance.

**Air Filter:** 3-stage and 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.

Engine	Volvo	Volvo D13J
Max power at	r/min	1 600
Net, ISO 9249/SAE J1349	kW	252
	hp	343
Gross, ISO 14396/SAE J1995	kW	253
	hp	344
Max torque	Nm	1 975
at engine speed	r/min	1 200
No. of cylinders		6
Displacement	l	12.8
Bore	mm	131
Stroke	mm	158

## 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. The master switch is standard. Contronics provides advanced monitoring of machine functions and important diagnostic information.

Voltage	V	24
Batteries	V	2 x 12
Battery capacity	Ah	200
Alternator	V/A	28 V / 180 A

## Undercarriage

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

EC400F L, NL		
Track shoe		2 x 50
Link pitch	mm	216
Shoe width	mm	600
Shoe width, triple grouser	mm	600 / 700 / 800 / 900
Shoe width, triple grouser (HD)	mm	600
Shoe width, double grouser	mm	600
Bottom rollers		2 x 9
Top rollers		2 x 2

## Hydraulic System

The hydraulic system, also known as the "Automatic Sensing Work Mode," is designed for high-productivity, high-digging capacity, high-maneuvering precision and excellent fuel economy. The summation system, boom, arm and swing priority along with boom and arm regeneration provides optimum performance.

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.

**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: 2 x Variable displacement axial piston pumps

Maximum flow	l/min	2 x 288
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### Pilot pump: Gear pump

Maximum flow	l/min	26.7
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### Max. pressure

Implement	MPa	32.4 / 35.3
Travel circuit	MPa	35.3
Slew circuit	MPa	27.5
Pilot circuit	MPa	3.9

## Hydraulic Motors

**Travel:** Variable displacement axial piston motor with mechanical brake

**Swing:** Fixed displacement piston motor with mechanical brake

## Hydraulic Cylinders

Boom		2
Bore x Stroke	ø x mm	160 x 1 530
Arm		1
Bore x Stroke	ø x mm	175 x 1 700
Bucket		1
Bore x Stroke	ø x mm	145 x 1 285
ME Bucket		1
Bore x Stroke	ø x mm	160 x 1 250
Bucket for LR boom		1
Bore x Stroke	ø x mm	140 x 1 140





### Swing system

The swing system uses an axial piston motors, driving a planetary gearbox for maximum torque. An automatic holding brake and anti-rebound valve are standard.

Max. slew speed	r/min	9.8
Max. slew torque	kNm	131

### 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	277
Max. travel speed (low)	km/h	3.3
Max. travel speed (high)	km/h	5.1
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 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 10vents.

**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

L <sub>pA</sub>	dB	71
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External sound level according to ISO 6395

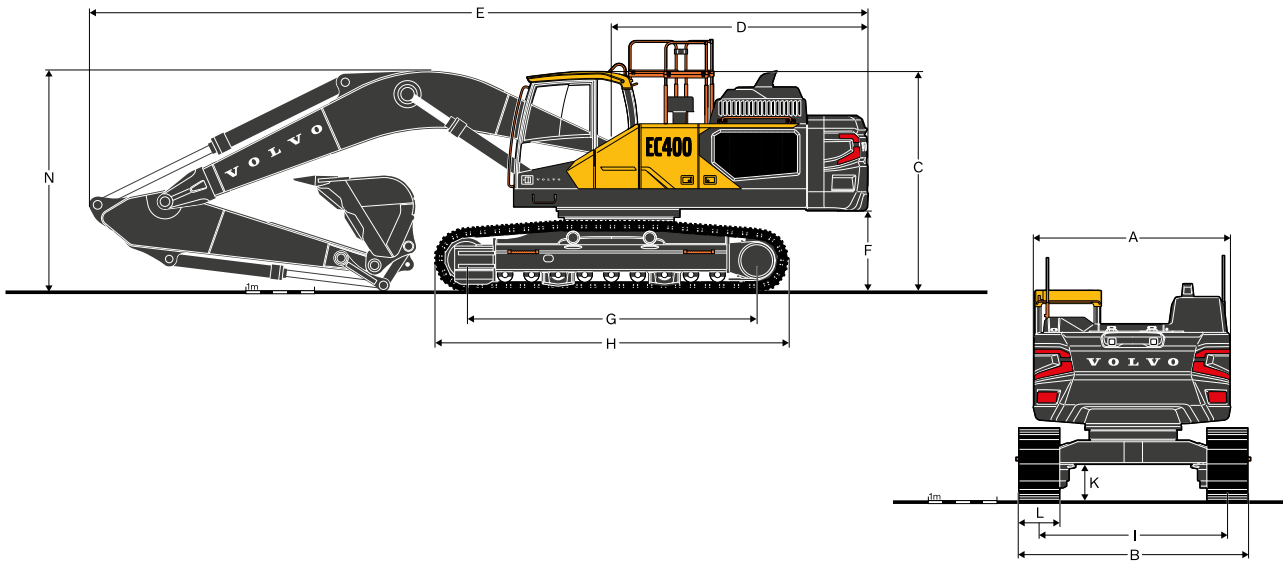
L <sub>WA</sub>	dB	106
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### Service Refill

Fuel tank	l	600
DEF/AdBlue® tank	l	45
Hydraulic system, total	l	440
Hydraulic tank	l	200
Engine oil	l	55
Engine coolant	l	60
Slew reduction unit	l	6.5
Travel reduction unit	l	2 x 6.8



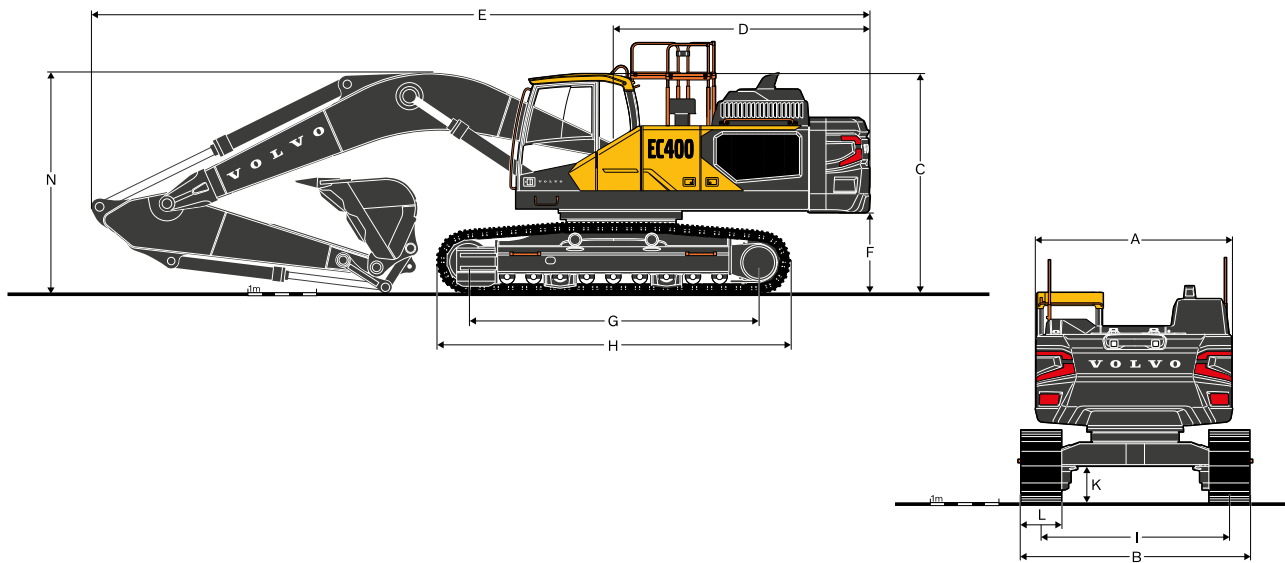
# Specifications



## DIMENSIONS

Description	Unit	EC400F L			
		6.2 m	6.45 m	6.45 m	6.45 m
<b>Boom</b>					
<b>Arm</b>					
A. Overall width of superstructure					
with walkway, handrail	mm	3 400	3 400	3 400	3 400
without walkway, handrail	mm	2 990	2 990	2 990	2 990
B. Overall width of undercarriage					
600 mm shoes	mm	3 340	3 340	3 340	3 340
700 mm shoes	mm	3 440	3 440	3 440	3 440
800 mm shoes	mm	3 540	3 540	3 540	3 540
900 mm shoes	mm	3 640	3 640	3 640	3 640
C. Overall height of					
Cab	mm	3 240	3 240	3 240	3 240
FOG	mm	3 330	3 330	3 330	3 330
Engine hood	mm	3 000	3 000	3 000	3 000
Diffuser	mm	3 240	3 240	3 240	3 240
Guardrail, unfolded	mm	3 590	3 590	3 590	3 590
Guardrail, folded	mm	3 110	3 110	3 110	3 110
Handrail, unfolded	mm	3 350	3 350	3 350	3 350
Handrail, folded	mm	3 110	3 110	3 110	3 110
With Boom/Arm/Bucket (with hydraulic hoses)	mm	3 880	3 820	3 720	3 840
With Boom/Arm (with hydraulic hoses)	mm	3 850	3 790	3 640	3 840
With Boom (with hydraulic hoses)	mm	3 020	3 020	3 020	3 020
D. Tail swing radius	mm	3 600	3 600	3 600	3 600
E. Overall length					
With Boom/Arm/Bucket	mm	11 070	11 320	11 260	11 270
With Boom/Arm	mm	11 070	11 320	11 260	11 270
With Boom	mm	9 740	10 010	10 010	10 010
F. Counterweight clearance without shoe grouser	mm	1 150	1 150	1 150	1 150
G. Tumbler length	mm	4 240	4 240	4 240	4 240
H. Track length	mm	5 180	5 180	5 180	5 180
I. Track gauge	mm	2 740	2 740	2 740	2 740
K. Min. ground clearance *	mm	480	480	480	480

\* without shoe grouser

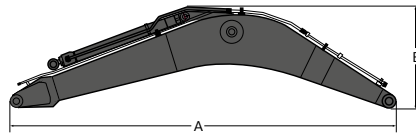


## DIMENSIONS

Description	Unit	EC400F NL			
		6.2 m	6.45 m		
Boom					
Arm		2.6 m	2.6 m	3.2 m	3.9 m
<b>A. Overall width of superstructure</b>					
with walkway, handrail	mm	3 400	3 400	3 400	3 400
without walkway, handrail	mm	2 990	2 990	2 990	2 990
<b>B. Overall width of undercarriage</b>					
600 mm shoes	mm	2 990	2 990	2 990	2 990
700 mm shoes	mm	3 090	3 090	3 090	3 090
800 mm shoes	mm	3 190	3 190	3 190	3 190
900 mm shoes	mm	3 290	3 290	3 290	3 290
<b>C. Overall height of</b>					
Cab	mm	3 240	3 240	3 240	3 240
FOG	mm	3 330	3 330	3 330	3 330
Engine hood	mm	3 000	3 000	3 000	3 000
Diffuser	mm	3 240	3 240	3 240	3 240
Guardrail, unfolded	mm	3 590	3 590	3 590	3 590
Guardrail, folded	mm	3 110	3 110	3 110	3 110
Handrail, unfolded	mm	3 350	3 350	3 350	3 350
Handrail, folded	mm	3 110	3 110	3 110	3 110
With Boom/Arm/Bucket (with hydraulic hoses)	mm	3 880	3 820	3 720	3 840
With Boom/Arm (with hydraulic hoses)	mm	3 850	3 790	3 640	3 840
With Boom (with hydraulic hoses)	mm	3 020	3 020	3 020	3 020
<b>D. Tail swing radius</b>	mm	3 600	3 600	3 600	3 600
<b>E. Overall length</b>					
With Boom/Arm/Bucket	mm	11 070	11 320	11 260	11 270
With Boom/Arm	mm	11 070	11 320	11 260	11 270
With Boom	mm	9 740	10 010	10 010	10 010
<b>F. Counterweight clearance without shoe grouser</b>	mm	1 150	1 150	1 150	1 150
<b>G. Tumbler length</b>	mm	4 240	4 240	4 240	4 240
<b>H. Track length</b>	mm	5 180	5 180	5 180	5 180
<b>I. Track gauge</b>	mm	2 390	2 390	2 390	2 390
<b>K. Min. ground clearance *</b>	mm	480	480	480	480

\* without shoe grouser

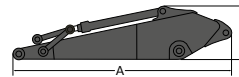
# Specifications



## BOOM

Description	Unit	6.2 m ME	6.45 m HD
Length	mm	6 460	6 710
Height	mm	1 710	1 690
Width	mm	820	820
Weight*	kg	3 530	3 690

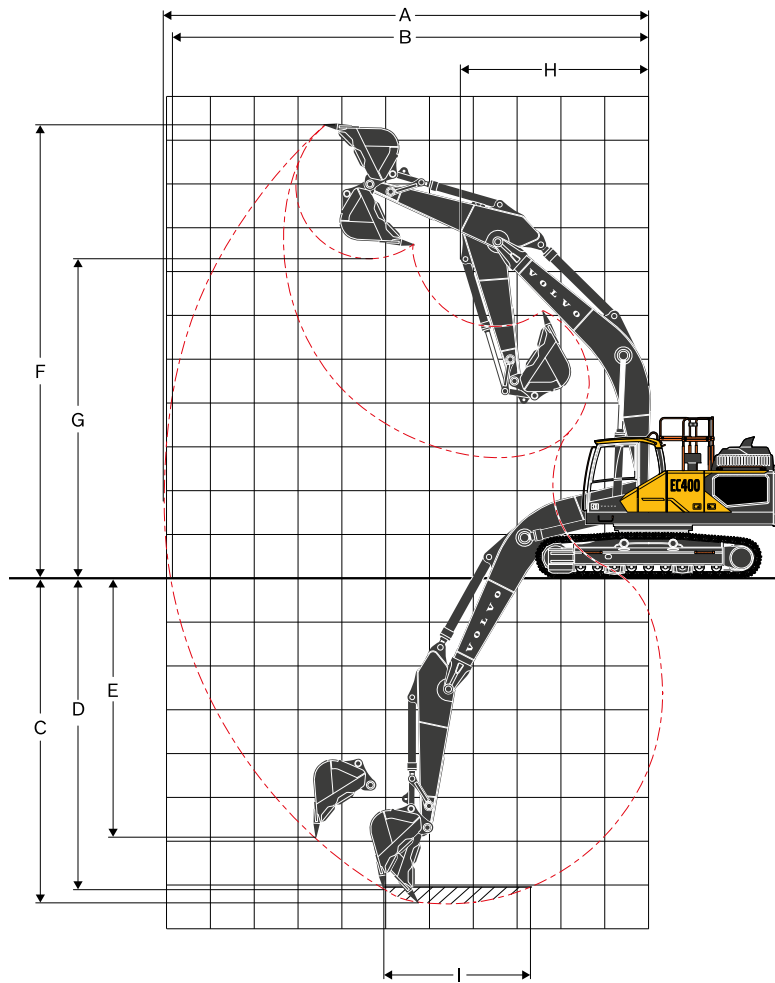
\* Includes cylinder, piping and pins



## ARM

Description	Unit	2.6 m ME	3.2 m HD	3.9 m GP
Length	mm	3 770	4 350	5 050
Height	mm	1 120	1 090	1 110
Width	mm	440	440	440
Weight*	kg	2 090	2 150	2 380

\* Includes cylinder, piping and pins



#### WORKING RANGES

Description	Unit	EC400F L, NL			
		6.2 m	2.6 m	3.2 m	3.9 m
<b>Boom</b>	<b>m</b>	<b>6.2 m</b>	<b>2.6 m</b>	<b>3.2 m</b>	<b>3.9 m</b>
<b>Arm</b>	<b>m</b>	<b>2.6 m</b>	<b>2.6 m</b>	<b>3.2 m</b>	<b>3.9 m</b>
Bucket radius	mm	1 842	1 842	1 842	1 842
A. Max Digging Reach	mm	10 450	10 695	11 220	11 855
B. Max Digging Reach on the Ground	mm	10 225	10 480	11 010	11 665
C. Max Digging Depth	mm	6 755	6 990	7 590	8 290
D. Max Digging Depth (2.44 m level)	mm	6 575	6 805	7 425	8 145
E. Max Vertical Wall Digging Depth	mm	4 860	5 000	5 510	6 110
F. Max Cutting Height	mm	10 055	10 195	10 370	10 640
G. Max Dumping Height	mm	6 800	6 950	7 140	7 415
H. Min front slew radius	mm	4 120	4 320	4 290	4 305

#### DIGGING FORCES WITH DIRECT FIT BUCKET

Bucket radius	mm	1 814	1 625	1 625	1 625	
Breakout force - bucket	SAE J1179, Normal	kN	215	197	198	197
	SAE J1179, Power Boost	kN	234	215	216	215
	ISO 6015, Normal	kN	243	221	222	222
	ISO 6015, Power Boost	kN	265	242	242	242
Tearout force - digger arm	SAE J1179, Normal	kN	188	195	162	141
	SAE J1179, Power Boost	kN	205	212	177	154
	ISO 6015, Normal	kN	194	201	166	144
	ISO 6015, Power Boost	kN	212	219	181	157
Rotation angle, bucket	°	164	180	178	178	

\*Machine with pin-on bucket

# Specifications

GROUND PRESSURE							
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	39 400	70.5	3 340	39 370	70.4	3 340
	600 (HD)	39 840	71.3	3 340	39 810	71.2	3 340
	700	39 850	61.1	3 440	39 820	61.0	3 440
	800	40 290	54.0	3 540	40 260	54.0	3 540
	900	40 740	48.6	3 640	40 710	48.5	3 640
Double grouser	600	39 670	71.0	3 340	39 640	70.9	3 340
Single grouser	600	39 470	70.6	3 340	39 440	70.5	3 340
		EC400F L, 6.2 m boom, 2.6 m arm, 2 000 kg bucket, 6 700 kg counterweight			EC400F L, 6.45 m boom, 2.6 m arm, 2 000 kg bucket, 6 700 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	39 430	70.5	3 340	39 660	70.9	3 340
	600 (HD)	39 870	71.3	3 340	40 100	71.7	3 340
	700	39 880	61.1	3 440	40 110	61.5	3 440
	800	40 320	54.1	3 540	40 550	54.4	3 540
	900	40 770	48.6	3 640	41 000	48.9	3 640
Double grouser	600	39 700	71.0	3 340	39 930	71.4	3 340
Single grouser	600	39 500	70.7	3 340	39 730	71.1	3 340
		EC400F L, 6.45 m boom, 3.2 m arm, 2 000 kg bucket, 6 700 kg counterweight			EC400F L, 6.45 m boom, 3.9 m arm, 2 000 kg bucket, 6 700 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	39 950	71.5	3 340	39 920	71.4	3 340
	600 (HD)	40 390	72.2	3 340	40 360	72.2	3 340
	700	40 400	61.9	3 440	40 370	61.9	3 440
	800	40 840	54.8	3 540	40 810	54.7	3 540
	900	41 290	49.2	3 640	41 260	49.2	3 640
Double grouser	600	40 220	71.9	3 340	40 190	71.9	3 340
Single grouser	600	40 020	71.6	3 340	39 990	71.5	3 340
		EC400F L, 6.2 m boom, 2.6 m arm, 2 000 kg bucket, 7 250 kg counterweight			EC400F L, 6.45 m boom, 2.6 m arm, 2 000 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	39 980	71.5	3 340	40 210	71.9	3 340
	600 (HD)	40 420	72.3	3 340	40 650	72.7	3 340
	700	40 430	62.0	3 440	40 660	62.3	3 440
	800	40 870	54.8	3 540	41 100	55.1	3 540
	900	41 320	49.3	3 640	41 550	49.5	3 640
Double grouser	600	40 250	72.0	3 340	40 480	72.4	3 340
Single grouser	600	40 050	71.6	3 340	40 280	72.0	3 340
		EC400F L, 6.45 m boom, 3.2 m arm, 2 000 kg bucket, 7 250 kg counterweight			EC400F L, 6.45 m boom, 3.9 m arm, 2 000 kg bucket, 7 250 kg counterweight		

**GROUND PRESSURE**

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	39 000	69.8	2 990	38 970	69.7	2 990	
	600 (HD)	39 440	70.5	2 990	39 410	70.5	2 990	
	700	39 450	60.5	3 090	39 420	60.4	3 090	
	800	39 890	53.5	3 190	39 860	53.5	3 190	
	900	40 340	48.1	3 290	40 310	48.1	290	
Double grouser	600	39 270	70.2	2 990	39 240	70.2	2 990	
Single grouser	600	39 070	69.9	2 990	39 040	69.8	2 990	
		<b>EC400F NL, 6.2 m boom, 2.6 m arm, 2 000 kg bucket, 6 700 kg counterweight</b>			<b>EC400F NL, 6.45 m boom, 2.6 m arm, 2 000 kg bucket, 6 700 kg counterweight</b>			
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	39 030	69.8	2 990	39 260	70.2	2 990	
	600 (HD)	39 470	70.6	2 990	39 700	71.0	2 990	
	700	39 480	60.5	3 090	39 710	60.9	3 090	
	800	39 920	53.6	3 190	40 150	53.9	3 190	
	900	40 370	48.1	3 290	40 600	48.4	3 290	
Double grouser	600	39 300	70.3	2 990	39 530	70.7	2 990	
Single grouser	600	39 100	69.9	2 990	39 330	70.3	2 990	
		<b>EC400F NL, 6.45 m boom, 3.2 m arm, 2 000 kg bucket, 6 700 kg counterweight</b>			<b>EC400F NL, 6.45 m boom, 3.9 m arm, 2 000 kg bucket, 6 700 kg counterweight</b>			
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	39 550	70.7	2 990	39 520	70.7	2 990	
	600 (HD)	39 990	71.5	2 990	39 960	71.5	2 990	
	700	40 000	61.3	3 090	39 970	61.3	3 090	
	800	40 440	54.2	3 190	40 410	54.2	3 190	
	900	40 890	48.8	3 290	40 860	48.7	3 290	
Double grouser	600	39 820	71.2	2 990	39 790	71.2	2 990	
Single grouser	600	39 620	70.9	2 990	39 590	70.8	2 990	
		<b>EC400F NL, 6.2 m boom, 2.6 m arm, 2 000 kg bucket, 7 250 kg counterweight</b>			<b>EC400F NL, 6.45 m boom, 2.6 m arm, 2 000 kg bucket, 7 250 kg counterweight</b>			
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	39 580	70.8	2 990	39 810	71.2	2 990	
	600 (HD)	40 020	71.6	2 990	40 250	72.0	2 990	
	700	40 030	61.4	3 090	40 260	61.7	3 090	
	800	40 470	54.3	3 190	40 700	54.6	3 190	
	900	40 920	48.8	3 290	41 150	49.1	3 290	
Double grouser	600	39 850	71.3	2 990	40 080	71.7	2 990	
Single grouser	600	39 650	70.9	2 990	39 880	71.3	2 990	
		<b>EC400F NL, 6.45 m boom, 3.2 m arm, 2 000 kg bucket, 7 250 kg counterweight</b>			<b>EC400F NL, 6.45 m boom, 3.9 m arm, 2 000 kg bucket, 7 250 kg counterweight</b>			

# Specifications

## BUCKET SELECTION GUIDE

Bucket type		Capacity	Cutting width	Weight	Teeth	EC400F L								
						600 mm shoe, 6 700 kg counterweight				600 mm shoe, 7 250 kg counterweight				
						6.2 m boom	6.45 m boom			6.2 m boom	6.45 m boom			
						L	mm	kg	EA	2.6 m arm	2.6 m arm	3.2 m arm	3.9 m arm	2.6 m arm
Direct fit Buckets	Fixed Ditching	950	1 500	841	N	C	C	C	C	C	C	C	C	
	General Purpose	1 420	1 200	1 610	5	C	C	C	C	C	C	C	C	C
		1 670	1 350	1 724	5	C	C	C	C	C	C	C	C	C
		1 920	1 500	1 865	5	C	C	C	C	C	C	C	C	C
		2 330	1 750	1 967	5	C	C	C	B	C	C	C	C	C
	Heavy Duty	1 420	1 200	1 713	5	D	D	D	D	D	D	D	D	D
		1 670	1 350	1 877	5	D	D	D	D	D	D	D	D	D
		1 920	1 500	2 004	5	D	D	D	C	D	D	D	D	D
		2 330	1 750	2 190	5	D	D	C	B	D	D	C	B	B
	Extreme Duty	1 920	1 530	2 368	4	D	D	D	C	D	D	D	D	C
		2 330	1 780	2 617	4	D	C	B	A	D	D	C	B	B
	High Capacity	2 440	1 600	1 796	5	C	C	C	B	C	C	C	C	C
		2 900	1 840	1 969	5	C	C	B	A	C	C	B	B	B
	Heavy Duty eXtreme	2 000	1 600	2 261	4	D	D	D	C	D	D	D	D	C
		2 200	1 720	2 334	4	D	D	C	B	D	D	D	D	B
		2 400	1 840	2 454	4	D	C	B	B	D	D	C	B	B
	Extreme Duty eXtreme	2 000	1 600	2 687	4	D	D	C	B	D	D	D	D	B
		2 200	1 720	2 816	4	D	C	B	A	D	D	C	B	B

Bucket type		Capacity	Cutting width	Weight	Teeth	EC400F NL								
						600 mm shoe, 6 700 kg counterweight				600 mm shoe, 7 250 kg counterweight				
						6.2 m boom	6.45 m boom			6.2 m boom	6.45 m boom			
						L	mm	kg	EA	2.6 m arm	2.6 m arm	3.2 m arm	3.9 m arm	2.6 m arm
Direct fit Buckets	Fixed Ditching	950	1 500	841	N	C	C	C	C	C	C	C	C	
	General Purpose	1 420	1 200	1 610	5	C	C	C	C	C	C	C	C	C
		1 670	1 350	1 724	5	C	C	C	C	C	C	C	C	C
		1 920	1 500	1 865	5	C	C	C	B	C	C	C	C	C
		2 330	1 750	1 967	5	C	C	B	A	C	C	B	B	B
	Heavy Duty	1 420	1 200	1 713	5	D	D	D	D	D	D	D	D	D
		1 670	1 350	1 877	5	D	D	D	C	D	D	D	D	C
		1 920	1 500	2 004	5	D	D	C	B	D	D	C	B	B
		2 330	1 750	2 190	5	C	B	B	x	C	C	B	A	A
	Extreme Duty	1 920	1 530	2 368	4	D	C	B	A	D	D	C	B	B
		2 330	1 780	2 617	4	B	B	x	x	C	B	A	x	x
	High Capacity	2 440	1 600	1 796	5	C	C	B	A	C	C	B	B	B
		2 900	1 840	1 969	5	B	B	x	x	B	B	A	x	x
	Heavy Duty eXtreme	2 000	1 600	2 261	4	D	C	B	A	D	D	C	B	B
		2 200	1 720	2 334	4	C	B	B	x	C	C	B	A	A
		2 400	1 840	2 454	4	B	B	A	x	C	B	B	x	x
	Extreme Duty eXtreme	2 000	1 600	2 687	4	C	B	B	x	C	C	B	x	x
		2 200	1 720	2 816	4	B	B	x	x	C	B	A	x	x

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**  
 D: 2 100 kg/m<sup>3</sup>  
 C: 1 800 kg/m<sup>3</sup>  
 B: 1 500 kg/m<sup>3</sup>  
 A: 1 200 kg/m<sup>3</sup>  
 X : Not recommended



**LIFTING CAPACITY EC400F 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.		m
		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	
Boom 6.2 m Arm 2.6 m Shoe 600 mm Counterweight 6 700 kg	7.5 m kg							*10 680	*10 680					*10 840	10 070	6.7
	6 m kg							*11 190	*11 190	*10 700	8 290			*10 720	7 960	7.7
	4.5 m kg					*15 780	*15 780	*12 620	11 450	*11 150	8 110			10 690	6 920	8.3
	3 m kg					*19 660	16 520	*14 390	10 870	*11 970	7 850			9 960	6 410	8.6
	1.5 m kg					*22 140	15 660	*15 890	10 390	11 990	7 590			9 790	6 260	8.6
	0 m kg					*22 670	15 370	16 620	10 110	11 810	7 430			10 130	6 450	8.3
	-1.5 m kg			*17 770	*17 770	*21 860	15 380	*16 460	10 040	11 790	7 420			11 180	7 070	7.8
	-3 m kg			*26 280	*26 280	*19 710	15 620	*14 950	10 190					*12 440	8 500	6.9
	-4.5 m kg					*15 190	*15 190							*12 170	*12 170	5.4
Boom 6.45 m Arm 3.2 m Shoe 600 mm Counterweight 6 700 kg	7.5 m kg									*9 320	8 530			*8 200	*8 200	7.7
	6 m kg									*9 440	8 460			*7 990	6 780	8.5
	4.5 m kg					*14 270	*14 270	*11 540	*11 540	*10 190	8 210	*8 780	6 100	*8 060	6 010	9.1
	3 m kg					*18 310	16 720	*13 480	10 950	*11 200	7 880	9 250	5 960	*8 380	5 610	9.3
	1.5 m kg					*21 280	15 660	*15 200	10 380	11 980	7 570	9 090	5 810	8 570	5 480	9.4
	0 m kg					*22 420	15 210	*16 270	10 020	11 730	7 350	8 970	5 700	8 790	5 590	9.1
	-1.5 m kg			*15 100	*15 100	*22 170	15 130	16 370	9 880	11 620	7 250			9 500	6 010	8.6
	-3 m kg	*17 580	*17 580	*23 830	*23 830	*20 770	15 280	*15 730	9 930	11 700	7 320			11 020	6 940	7.8
	-4.5 m kg			*24 040	*24 040	*17 800	15 660	*13 350	10 210					*11 700	9 030	6.6
Boom 6.2 m Arm 2.6 m Shoe 600 mm Counterweight 7 250 kg	7.5 m kg							*10 680	*10 680					*10 840	10 440	6.7
	6 m kg							*11 190	*11 190	*10 700	8 600			*10 720	8 270	7.7
	4.5 m kg					*15 780	*15 780	*12 620	11 880	*11 150	8 430			*10 820	7 200	8.3
	3 m kg					*19 660	17 150	*14 390	11 290	*11 970	8 160			10 300	6 680	8.6
	1.5 m kg					*22 140	16 290	*15 890	10 810	12 390	7 910			10 120	6 530	8.6
	0 m kg					*22 670	16 000	*16 650	10 530	12 210	7 750			10 480	6 720	8.3
	-1.5 m kg			*17 770	*17 770	*21 860	16 020	*16 460	10 470	12 200	7 730			11 560	7 370	7.8
	-3 m kg			*26 280	*26 280	*19 710	16 260	*14 950	10 610					*12 440	8 850	6.9
	-4.5 m kg					*15 190	*15 190							*12 170	*12 170	5.4
Boom 6.45 m Arm 3.2 m Shoe 600 mm Counterweight 7 250 kg	7.5 m kg									*9 320	8 850			*8 200	*8 200	7.7
	6 m kg									*9 440	8 780			*7 990	7 050	8.5
	4.5 m kg					*14 270	*14 270	*11 540	*11 540	*10 190	8 520	*8 780	6 350	*8 060	6 270	9.1
	3 m kg					*18 310	17 350	*13 480	11 370	*11 200	8 200	9 570	6 210	*8 380	5 860	9.3
	1.5 m kg					*21 280	16 300	*15 200	10 810	*12 170	7 890	9 400	6 060	8 870	5 720	9.4
	0 m kg					*22 420	15 850	*16 270	10 450	12 140	7 670	9 290	5 960	9 110	5 850	9.1
	-1.5 m kg			*15 100	*15 100	*22 170	15 760	*16 490	10 300	12 030	7 570			9 830	6 280	8.6
	-3 m kg	*17 580	*17 580	*23 830	*23 830	*20 770	15 910	*15 730	10 350	12 100	7 640			*11 400	7 240	7.8
	-4.5 m kg			*24 040	*24 040	*17 800	16 290	*13 350	10 630					*11 700	9 410	6.6

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.

# Specifications

## LIFTING CAPACITY EC400F NL

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.		m
		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	
Boom 6.2 m Arm 2.6 m Shoe 600 mm Counterweight 6 700 kg	7.5 m kg							*10 680	10 580					*10 840	8 760	6.7
	6 m kg							*11 190	10 370	*10 700	7 200			*10 720	6 910	7.7
	4.5 m kg					*15 780	15 250	*12 620	9 900	*11 150	7 030			10 590	5 990	8.3
	3 m kg					*19 660	13 960	*14 390	9 340	*11 970	6 770			9 860	5 530	8.6
	1.5 m kg					*22 140	13 150	*15 890	8 870	11 870	6 520			9 690	5 380	8.6
	0 m kg					*22 670	12 870	16 460	8 610	11 690	6 370			10 020	5 530	8.3
	-1.5 m kg			*17 770	*17 770	*21 860	12 890	16 380	8 540	11 670	6 350			11 060	6 060	7.8
	-3 m kg			*26 280	25 880	*19 710	13 120	*14 950	8 680					*12 440	7 280	6.9
	-4.5 m kg					*15 190	13 640							*12 170	10 500	5.4
Boom 6.45 m Arm 3.2 m Shoe 600 mm Counterweight 6 700 kg	7.5 m kg									*9 320	7 440			*8 200	7 150	7.7
	6 m kg									*9 440	7 360			*7 990	5 880	8.5
	4.5 m kg					*14 270	*14 270	*11 540	10 030	*10 190	7 120	*8 780	5 270	*8 060	5 200	9.1
	3 m kg					*18 310	14 150	*13 480	9 410	*11 200	6 800	9 160	5 130	*8 380	4 830	9.3
	1.5 m kg					*21 280	13 150	*15 200	8 870	11 860	6 500	8 990	4 990	8 480	4 700	9.4
	0 m kg					*22 420	12 720	*16 270	8 520	11 610	6 290	8 880	4 880	8 700	4 790	9.1
	-1.5 m kg			*15 100	*15 100	*22 170	12 640	16 210	8 380	11 500	6 190			9 400	5 150	8.6
	-3 m kg	*17 580	*17 580	*23 830	*23 830	*20 770	12 780	*15 730	8 430	11 570	6 260			10 910	5 940	7.8
	-4.5 m kg			*24 040	*24 040	*17 800	13 140	*13 350	8 700					*11 700	7 720	6.6
Boom 6.2 m Arm 2.6 m Shoe 600 mm Counterweight 7 250 kg	7.5 m kg							*10 680	*10 680					*10 840	10 440	6.7
	6 m kg							*11 190	*11 190	*10 700	8 600			*10 720	8 270	7.7
	4.5 m kg					*15 780	*15 780	*12 620	11 880	*11 150	8 430			*10 820	7 200	8.3
	3 m kg					*19 660	17 150	*14 390	11 290	*11 970	8 160			10 300	6 680	8.6
	1.5 m kg					*22 140	16 290	*15 890	10 810	12 390	7 910			10 120	6 530	8.6
	0 m kg					*22 670	16 000	*16 650	10 530	12 210	7 750			10 480	6 720	8.3
	-1.5 m kg			*17 770	*17 770	*21 860	16 020	*16 460	10 470	12 200	7 730			11 560	7 370	7.8
	-3 m kg			*26 280	*26 280	*19 710	16 260	*14 950	10 610					*12 440	8 850	6.9
	-4.5 m kg					*15 190	*15 190							*12 170	*12 170	5.4
Boom 6.45 m Arm 3.2 m Shoe 600 mm Counterweight 7 250 kg	7.5 m kg									*9 320	8 850			*8 200	*8 200	7.7
	6 m kg									*9 440	8 780			*7 990	7 050	8.5
	4.5 m kg					*14 270	*14 270	*11 540	*11 540	*10 190	8 520	*8 780	6 350	*8 060	6 270	9.1
	3 m kg					*18 310	17 350	*13 480	11 370	*11 200	8 200	9 570	6 210	*8 380	5 860	9.3
	1.5 m kg					*21 280	16 300	*15 200	10 810	*12 170	7 890	9 400	6 060	8 870	5 720	9.4
	0 m kg					*22 420	15 850	*16 270	10 450	12 140	7 670	9 290	5 960	9 110	5 850	9.1
	-1.5 m kg			*15 100	*15 100	*22 170	15 760	*16 490	10 300	12 030	7 570			9 830	6 280	8.6
	-3 m kg	*17 580	*17 580	*23 830	*23 830	*20 770	15 910	*15 730	10 350	12 100	7 640			*11 400	7 240	7.8
	-4.5 m kg			*24 040	*24 040	*17 800	16 290	*13 350	10 630					*11 700	9 410	6.6

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 EU StageV requirements	•
Dual cooling fan system including electric driven for CAC	•
Cyclone pre-cleaner	•
Fuel shut off valve	•
Engine block heater	o
Coolant heater by diesel	o
Reversible fan drive	o
Tropical cooling	o
Pre-cleaner, oil bath	o
Air filter, High efficiency	o
Delayed engine Shutdown	o
Automatic engine shutdown	o
Water separator with heater	o
Arctic regeneration	o
Regeneration control	o
Oil sampling for engine oil	o

### Electric / Electronic control system

Anti-theft with code lock system	•
Alternator, 180 A	•
Automatic idling system	•
Lock Out / Tag Out function on main battery switch	•
Standard light	•
Basic light package	o
Advanced light package	o
Deluxe light package	o
Arm light	o
LH light	o

### Undercarriage and structures

3-point side access	•
Direct filling DEF(AdBlue) / Sight gauge and splash guard	•
Openable combined muffler hood	•
Handrail & Guardrail, Foldable	•
Inner rail	o
Cabin entrance, fixed/foldable	o
Walk way, fixed/foldable	o
SIPS (Side Impact Protection System)	o
HD Side door & hood with screen	o
Without lower structure	o
Lower frame,Retractable	o
Link 600/700/800/900 mm triple grouser shoe	o
Link 600 mm triple grouser shoe, HD	o
Link 600 mm double grouser shoe	o
Full track guard	o
Track tensioner,sand protect	o
Removable counterweight	o

### Hydraulic system

EH(Electro-Hydraulic) control system	•
New work mode with 10 steps	•
Auto power boost	•
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
Hydraulic oil bio 46	o
Pattern change	o
Boom float function	o
Straight travel pedal	o
Comfort driving control	o
Creep mode	o
Provision, Magnet application	o
Dust suppression system	o
Dedicated drain line	o
Variable X3 P-Q control	o
Hose rupture valve for boom	•
Hose rupture valve for arm	•

## STANDARD AND OPTIONAL EQUIPMENT

• = Standard / o = Optional

### Cab and interior

Keyless engine start and stop	•
8" HD display	•
ROPS certified cab	•
Tiltable left console	•
Digital hour meter	•
Wireless mobile charger with Kinematic sensor package option	•
Various storage space with cool/heated	•
Cleaning air gun	o
1 piece wind shield cab	o
High visibility cab	o
Cabin large mirror, Heated	o
Cabin large mirror	o
Basic / Premium / Deluxe seat	o
Seat belt, 2 inch 2 point / 3 inch 2 point / 3 inch 3 point	o
Climate control-HEPA filter	o
Radio with MP3/USB/Bluetooth	o
Front rain shield	o
Sun screen	o
Lower wiper	o
Sun shield, roof hatch	o
Foot rest, High mount	o
FOG (Falling Object Guard)	o
FOPS (Falling Object Protection Structure)	o
Safety net	o

### Digging equipment

6.45 m HD	•
6.2 m ME / Non-Boom	o
3.2 m HD	•
2.6 m ME / 3.9 m GP / Non-Arm	o

### Machine controls

Kinematic sensor package	•
Volvo Co-Pilot 2nd display, 12.8" touchable Full HD	•
Dig Assist, Start	o
Dig Assist, 2D	o
Dig Assist, In-Field Design	o
Dig Assist, Topcon 3D-MC	o
Dig Assist, Trimble Earthworks	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

### Safety and security

Travel alarm, beep / white noise	o
Flashing beacon, LED	o
Green light beacon	o
Rear view camera	•
Side view camera	o
HD VSV(Volvo Smart View)	o
HD VSV with obstacle detection	o
Provision, HD VSV with obstacle detection	o

### Service and maintenance

Fuel level gauge	•
Swing out A/C condenser	•
Fuel filler pump	o
Fast Fuel Fill preparation	o
Quick Hydraulic Oil Fill connection	o
Quick Engine Oil Change	o
Jump start connector	o
Auto lubrication system	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.

**V O L V O**