

V O L V O



Volvo Excavators 39.4-41.8 t / 86,800-92,180 lb 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 1600pm
- 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

# 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 (r/s)	1,600 (27)
Net, ISO 9249/SAE J1349	kW (hp)	252 (338)
Gross, ISO 14396/SAE J1995	kW (hp)	253 (339)
Max torque	Nm (ft lbf)	1,975 (1,457)
at engine speed	r/min (r/s)	1,200 (20)
No. of cylinders		6
Displacement	l (in <sup>3</sup> )	12.8 (781)
Bore	mm (in)	131 (5.16)
Stroke	mm (in)	158 (6.22)

## 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 and structures

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

EC400F L		
Track shoe		2 x 50
Link pitch	mm (in)	216 (8.5)
Shoe width	mm (in)	600 (24)
Shoe width, triple grouser	mm (in)	600 / 700 / 800 / 900 (24 / 28 / 32 / 36)
Shoe width, triple grouser (HD)	mm (in)	600 (24)
Shoe width, double grouser	mm (in)	600 (24)
Bottom rollers		2 x 9
Top rollers		2 x 2
EC400F LR		
Track shoe		2 x 52
Link pitch	mm (in)	216 (8.5)
Shoe width, triple grouser	mm (in)	600 / 700 / 800 / 900 (24 / 28 / 32 / 36)
Shoe width, double grouser	mm (in)	600 / 700 (24 / 28)
Bottom rollers		2 x 9
Top rollers		2 x 3

## 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 (gal/min)	2 x 288 (2 x 76)
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### Pilot pump: Gear pump

Maximum flow	l/min (gal/min)	26.7 (7.1)
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### Max. pressure

Implement	MPa (psi)	32.4 / 35.3 (4 690 / 5 120)
Travel circuit	MPa (psi)	35.3 (5,120)
Slew circuit	MPa (psi)	27.5 (3,980)
Pilot circuit	MPa (psi)	3.9 (570)

## 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 (ø x in)	160 x 1 530 (6.3 x 60.2)
Arm		1
Bore x Stroke	ø x mm (ø x in)	175 x 1 700 (6.9 x 66.9)
Bucket		1
Bore x Stroke	ø x mm (ø x in)	145 x 1 285 (5.7 x 50.6)
ME Bucket		1
Bore x Stroke	ø x mm (ø x in)	160 x 1 250 (6.3 x 49.2)

### 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 (ft lbf)	131 (96,252)

### 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 (lbf)	277 (62,181)
Max. travel speed (low)	km/h (mi/h)	3.3 (2.1)
Max. travel speed (high)	km/h (mi/h)	5.1 (3.2)
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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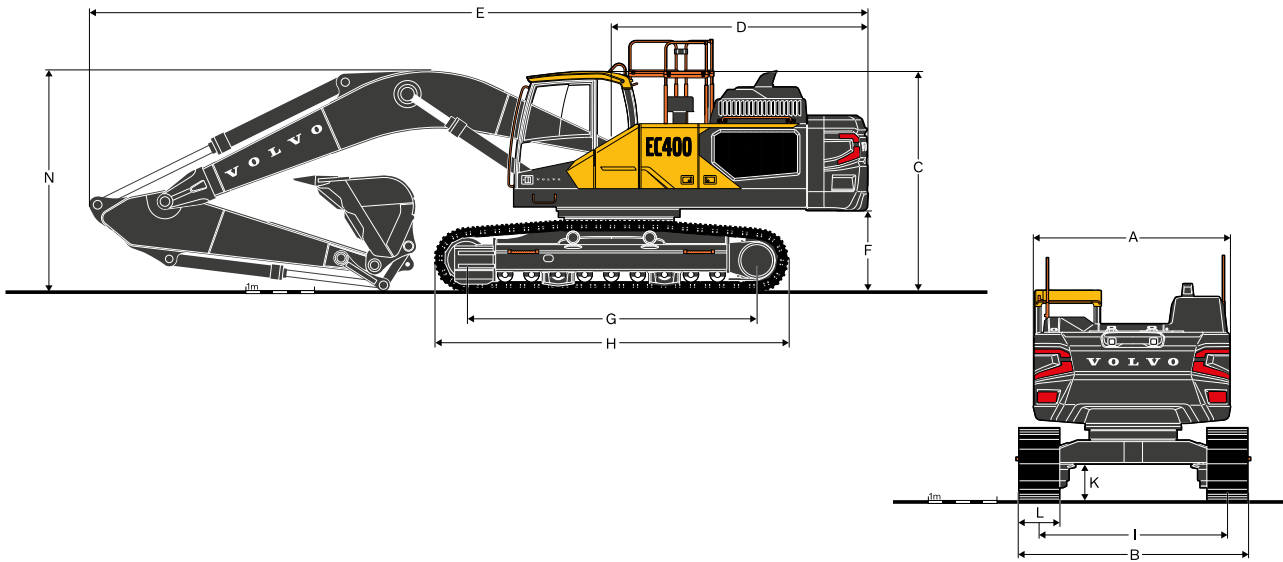
External sound level according to ISO 6395

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

Fuel tank	l (gal)	600 (159)
DEF/AdBlue® tank	l (gal)	45 (12)
Hydraulic system, total	l (gal)	440 (116)
Hydraulic tank	l (gal)	200 (53)
Engine oil	l (gal)	55 (15)
Engine coolant	l (gal)	60 (16)
Slew reduction unit	l (gal)	6.5 (1.7)
Travel reduction unit	l (gal)	2 x 6.8 (2 x 1.8)

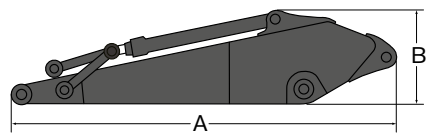
# Specifications



## DIMENSIONS

Description	Unit	EC400F L								EC400F LR	
		6.2 m (20'4")		6.45 m (21'2")				8.5 m (27'11")			
Boom		2.6 m	8'6"	2.6 m	8'6"	3.2 m	10'6"	3.9 m	12'10"	5.0	16'5"
Arm											
<b>A. Overall width of superstructure</b>											
with walkway, handrail	mm ft in	3,400	11'2"	3,400	11'2"	3,400	11'2"	3,400	11'2"	3,400	11'2"
without walkway, handrail	mm ft in	2,990	9'10"	2,990	9'10"	2,990	9'10"	2,990	9'10"	2,990	9'10"
<b>B. Overall width of undercarriage</b>											
600 mm shoes	mm ft in	3,340	10'11"	3,340	10'11"	3,340	10'11"	3,340	10'11"	3,340	10'11"
700 mm shoes	mm ft in	3,440	11'3"	3,440	11'3"	3,440	11'3"	3,440	11'3"	3,440	11'3"
800 mm shoes	mm ft in	3,540	11'7"	3,540	11'7"	3,540	11'7"	3,540	11'7"	3,540	11'7"
900 mm shoes	mm ft in	3,640	11'11"	3,640	11'11"	3,640	11'11"	3,640	11'11"	3,640	11'11"
<b>C. Overall height of</b>											
Cab	mm ft in	3,240	10'8"	3,240	10'8"	3,240	10'8"	3,240	10'8"	3,240	10'8"
FOG	mm ft in	3,330	10'11"	3,330	10'11"	3,330	10'11"	3,330	10'11"	3,330	10'11"
Engine hood	mm ft in	3,000	9'10"	3,000	9'10"	3,000	9'10"	3,000	9'10"	3,000	9'10"
Diffuser	mm ft in	3,240	10'8"	3,240	10'8"	3,240	10'8"	3,240	10'8"	3,240	10'8"
Guardrail, unfolded	mm ft in	3,590	11'9"	3,590	11'9"	3,590	11'9"	3,590	11'9"	3,590	11'9"
Guardrail, folded	mm ft in	3,110	10'2"	3,110	10'2"	3,110	10'2"	3,110	10'2"	3,110	10'2"
Handrail, unfolded	mm ft in	3,350	11'	3,350	11'	3,350	11'	3,350	11'	3,350	11'
Handrail, folded	mm ft in	3,110	10'2"	3,110	10'2"	3,110	10'2"	3,110	10'2"	3,110	10'2"
With Boom/Arm/Bucket (with hydraulic hoses)	mm ft in	3,880	12'9"	3,820	12'6"	3,720	12'2"	3,840	12'7"	4,470	14'8"
With Boom/Arm (with hydraulic hoses)	mm ft in	3,850	12'8"	3,790	12'5"	3,640	11'11"	3,840	12'7"	4,470	14'8"
With Boom (with hydraulic hoses)	mm ft in	3,020	9'11"	3,020	9'11"	3,020	9'11"	3,020	9'11"	3,290	10'10"
<b>D. Tail swing radius</b>											
	mm ft in	3,600	11'10"	3,600	11'10"	3,600	11'10"	3,600	11'10"	3,600	11'10"
<b>E. Overall length</b>											
With Boom/Arm/Bucket	mm ft in	11,070	36'4"	11,320	37'2"	11,260	36'11"	11,270	37'0"	13,130	43'1"
With Boom/Arm	mm ft in	11,070	36'4"	11,320	37'2"	11,260	36'11"	11,270	37'0"	13,130	43'1"
With Boom	mm ft in	9,740	31'11"	10,010	32'10"	10,010	32'10"	10,010	32'10"	12,130	39'10"
<b>F. Counterweight clearance without shoe grouser</b>											
	mm ft in	1,150	3'9"	1,150	3'9"	1,150	3'9"	1,150	3'9"	1,150	3'9"
<b>G. Tumbler length</b>											
	mm ft in	4,240	13'11"	4,240	13'11"	4,240	13'11"	4,240	13'11"	4,240	13'11"
<b>H. Track length</b>											
	mm ft in	5,180	17'0"	5,180	17'0"	5,180	17'0"	5,180	17'0"	5,180	17'0"
<b>I. Track gauge</b>											
	mm ft in	2,740	9'0"	2,740	9'0"	2,740	9'0"	2,740	9'0"	2,740	9'0"
<b>K. Min. ground clearance *</b>											
	mm ft in	480	1'7"	480	1'7"	480	1'7"	480	1'7"	480	1'7"

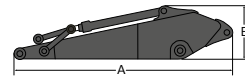
\* without shoe grouser



**BOOM**

Description	Unit		6.2 m ME	20'4" ME	6.45 m HD	21'2" HD	8.5 m LR	27'11" LR
Length	mm	ft in	6,460	21'2"	6,710	22'0"	8,760	28'9"
Height	mm	ft in	1,710	5'7"	1,690	5'7"	1,800	5'11"
Width	mm	ft in	820	2'8"	820	2'8"	820	2'8"
Weight*	kg	lb	3,530	7,780	3,690	8,140	4,080	9,000

\* Includes cylinder, piping and pins



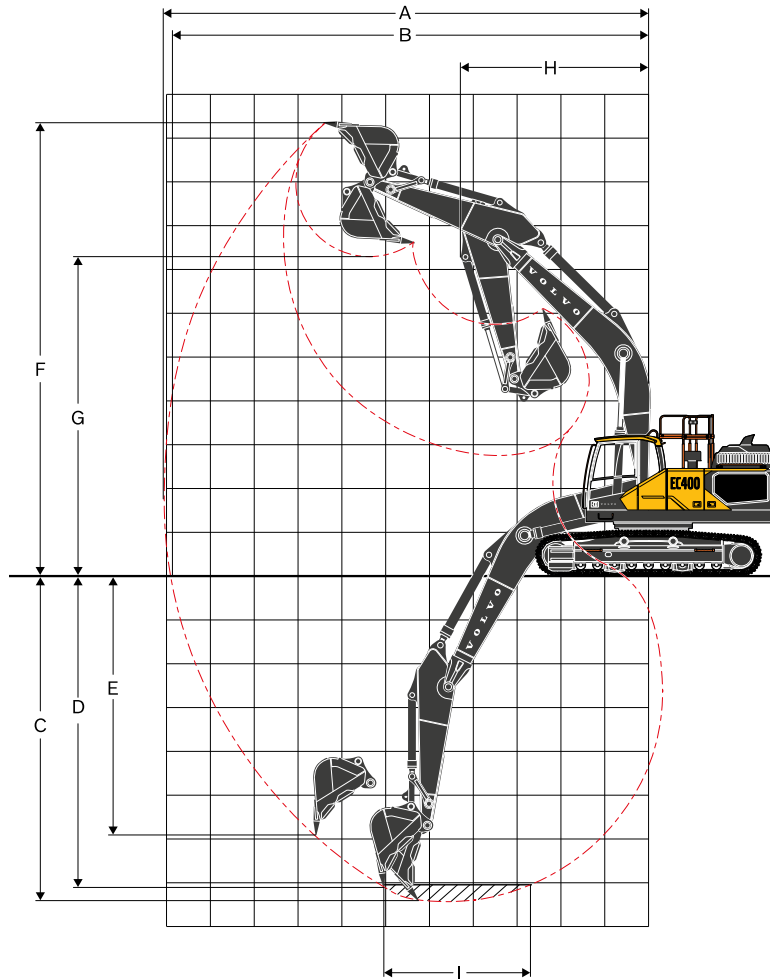
**ARM**

Description	Unit		2.6 m ME	8'6" ME	3.2 m HD	10'6" HD	3.9 m GP	12'10" GP	5.0 m LR	16'5" LR
Length	mm	ft in	3,770	12'4"	4,350	14'3"	5,050	16'7"	6,160	20'3"
Height	mm	ft in	1,120	3'8"	1,090	3'7"	1,110	3'8"	1,040	3'5"
Width	mm	ft in	440	1'5"	440	1'5"	440	1'5"	420	1'5"
Weight*	kg	lb	2,090	4,610	2,150	4,740	2,380	5,250	2,220	4,900

\* Includes cylinder, piping and pins



# Specifications



## WORKING RANGES

Description	Unit	EC400F L								EC400F LR		
Boom	m	6.2 m (20'4")		6.45 m (21'2")				8.5 m (27'11")				
Arm	m	ft in	2.6 m	8'6"	2.6 m	8'6"	3.2 m	10'6"	3.9 m	12'10"	5.0 m	16'5"
A. Max Digging Reach	mm	ft in	10,450	34'3"	10,695	35'1"	11,220	36'10"	11,855	38'11"	14,750	48'5"
B. Max Digging Reach on the Ground	mm	ft in	10,225	33'7"	10,480	34'5"	11,010	36'1"	11,665	38'3"	14,590	47'10"
C. Max Digging Depth	mm	ft in	6,755	22'2"	6,990	22'11"	7,590	24'11"	8,290	27'2"	10,980	36'0"
D. Max Digging Depth (2.44 m (8'0") level)	mm	ft in	6,575	21'7"	6,805	22'4"	7,425	24'4"	8,145	26'9"	10,860	35'8"
E. Max Vertical Wall Digging Depth	mm	ft in	4,860	15'11"	5,000	16'5"	5,510	18'1"	6,110	20'1"	10,185	33'5"
F. Max Cutting Height	mm	ft in	10,055	33'0"	10,195	33'5"	10,370	34'0"	10,640	34'11"	12,610	41'4"
G. Max Dumping Height	mm	ft in	6,800	22'4"	6,950	22'10"	7,140	23'5"	7,415	24'4"	9,610	31'6"
H. Min front slew radius	mm	ft in	4,120	13'6"	4,320	14'2"	4,290	14'1"	4,305	14'1"	5,730	18'10"

## DIGGING FORCES WITH DIRECT FIT BUCKET

Bucket radius	mm	ft in	1,814	5'11"	1,625	5'4"	1,625	5'4"	1,625	5'4"	1,625	5'4"
Breakout force - bucket	SAE J1179, Normal	kN	215	48,280	197	44,280	198	44,410	197	44,370	148	33,340
	SAE J1179, Power Boost	kN	234	52,670	215	48,300	216	48,450	215	48,410	148	33,340
	ISO 6015, Normal	kN	243	54,650	221	49,780	222	49,930	222	49,890	166	37,410
	ISO 6015, Power Boost	kN	265	59,620	242	54,300	242	54,470	242	54,420	166	37,410
Tearout force - digger arm	SAE J1179, Normal	kN	188	42,300	195	43,770	162	36,390	141	31,750	120	26,980
	SAE J1179, Power Boost	kN	205	46,140	212	47,740	177	39,700	154	34,640	131	29,430
	ISO 6015, Normal	kN	194	43,680	201	45,090	166	37,330	144	32,430	122	27,440
	ISO 6015, Power Boost	kN	212	47,650	219	49,190	181	40,720	157	35,380	133	29,930
Rotation angle, bucket		°	164		180		178		178		177	

\*Machine with pin-on bucket



**GROUND PRESSURE**

Description	Shoe width		Operating weight		Ground pressure		Overall width		Operating weight		Ground pressure		Overall width	
	mm	in	kg	lb	kPa	psi	mm	ft in	kg	lb	kPa	psi	mm	ft in
Triple grouser	600	24	39,400	86,880	70.5	10.2	3,340	10'11"	39,370	86,810	70.4	10.2	3,340	10'11"
	600 (HD) 24 (HD)		39,840	87,850	71.3	10.3	3,340	10'11"	39,810	87,780	71.2	10.3	3,340	10'11"
	700	28	39,850	87,870	61.1	8.9	3,440	11'3"	39,820	87,800	61.0	8.8	3,440	11'3"
	800	32	40,290	88,840	54.0	7.8	3,540	11'7"	40,260	88,770	54.0	7.8	3,540	11'7"
Double grouser	600	24	39,670	87,470	71.0	10.3	3,340	10'11"	39,640	87,410	70.9	10.3	3,340	10'11"
Single grouser	600	24	39,470	87,030	70.6	10.2	3,340	10'11"	39,440	86,970	70.5	10.2	3,340	10'11"
			<b>EC400F L, 6.2 m (20'4") boom, 2.6 m (8'6") arm, 2,000 kg (4,410 lb) bucket, 6,700 kg (14,770 lb) counterweight</b>						<b>EC400F L, 6.45 m (21'2") boom, 2.6 m (8'6") arm, 2,000 kg (4,410 lb) bucket, 6,700 kg (14,770 lb) counterweight</b>					
Description	Shoe width		Operating weight		Ground pressure		Overall width		Operating weight		Ground pressure		Overall width	
	mm	in	kg	lb	kPa	psi	mm	ft in	kg	lb	kPa	psi	mm	ft in
Triple grouser	600	24	39,430	86,940	70.5	10.2	3,340	10'11"	39,660	87,450	70.9	10.3	3,340	10'11"
	600 (HD) 24 (HD)		39,870	87,910	71.3	10.3	3,340	10'11"	40,100	88,420	71.7	10.4	3,340	10'11"
	700	28	39,880	87,940	61.1	8.9	3,440	11'3"	40,110	88,440	61.5	8.9	3,440	11'3"
	800	32	40,320	88,910	54.1	7.8	3,540	11'7"	40,550	89,410	54.4	7.9	3,540	11'7"
Double grouser	600	24	39,700	87,540	71.0	10.3	3,340	10'11"	39,930	88,050	71.4	10.4	3,340	10'11"
Single grouser	600	24	39,500	87,100	70.7	10.2	3,340	10'11"	39,730	87,600	71.1	10.3	3,340	10'11"
			<b>EC400F L, 6.45 m (21'2") boom, 3.2 m (10'6") arm, 2,000 kg (4,410 lb) bucket, 6,700 kg (14,770 lb) counterweight</b>						<b>EC400F L, 6.45 m (21'2") boom, 3.9 m (12'10") arm, 2,000 kg (4,410 lb) bucket, 6,700 kg (14,770 lb) counterweight</b>					
Description	Shoe width		Operating weight		Ground pressure		Overall width		Operating weight		Ground pressure		Overall width	
	mm	in	kg	lb	kPa	psi	mm	ft in	kg	lb	kPa	psi	mm	ft in
Triple grouser	600	24	39,950	88,090	71.5	10.4	3,340	10'11"	39,920	88,020	71.4	10.3	3,340	10'11"
	600 (HD) 24 (HD)		40,390	89,060	72.2	10.5	3,340	10'11"	40,360	88,990	72.2	10.5	3,340	10'11"
	700	28	40,400	89,080	61.9	9.0	3,440	11'3"	40,370	89,020	61.9	9.0	3,440	11'3"
	800	32	40,840	90,050	54.8	7.9	3,540	11'7"	40,810	89,990	54.7	7.9	3,540	11'7"
Double grouser	600	24	40,220	88,690	71.9	10.4	3,340	10'11"	40,190	88,620	71.9	10.4	3,340	10'11"
Single grouser	600	24	40,020	88,240	71.6	10.4	3,340	10'11"	39,990	88,180	71.5	10.4	3,340	10'11"
			<b>EC400F L, 6.2 m (20'4") boom, 2.6 m (8'6") arm, 2,000 kg (4,410 lb) bucket, 7,250 kg (15,990 lb) counterweight</b>						<b>EC400F L, 6.45 m (21'2") boom, 2.6 m (8'6") arm, 2,000 kg (4,410 lb) bucket, 7,250 kg (15,990 lb) counterweight</b>					
Description	Shoe width		Operating weight		Ground pressure		Overall width		Operating weight		Ground pressure		Overall width	
	mm	in	kg	lb	kPa	psi	mm	ft in	kg	lb	kPa	psi	mm	ft in
Triple grouser	600	24	39,980	88,160	71.5	10.4	3,340	10'11"	40,210	88,660	71.9	10.4	3,340	10'11"
	600 (HD) 24 (HD)		40,420	89,130	72.3	10.5	3,340	10'11"	40,650	89,630	72.7	10.5	3,340	10'11"
	700	28	40,430	89,150	62.0	9.0	3,440	11'3"	40,660	89,660	62.3	9.0	3,440	11'3"
	800	32	40,870	90,120	54.8	7.9	3,540	11'7"	41,100	90,630	55.1	8.0	3,540	11'7"
Double grouser	600	24	40,250	88,750	72.0	10.4	3,340	10'11"	40,480	89,260	72.4	10.5	3,340	10'11"
Single grouser	600	24	40,050	88,310	71.6	10.4	3,340	10'11"	40,280	88,820	72.0	10.4	3,340	10'11"
			<b>EC400F L, 6.45 m (21'2") boom, 3.2 m (10'6") arm, 2,000 kg (4,410 lb) bucket, 7,250 kg (15,990 lb) counterweight</b>						<b>EC400F L, 6.45 m (21'2") boom, 3.9 m (12'10") arm, 2,000 kg (4,410 lb) bucket, 7,250 kg (15,990 lb) counterweight</b>					
Description	Shoe width		Operating weight		Ground pressure		Overall width		Operating weight		Ground pressure		Overall width	
	mm	in	kg	lb	kPa	psi	mm	ft in	kg	lb	kPa	psi	mm	ft in
Triple grouser	600	24	40,470	89,240	72.4	10.5	3,340	10'11"						
	600 (HD) 24 (HD)		40,910	90,210	73.2	10.6	3,340	10'11"						
	700	28	40,920	90,230	62.7	9.1	3,440	11'3"						
	800	32	41,360	91,200	55.5	8.0	3,540	11'7"						
Double grouser	600	24	40,740	89,830	72.9	10.6	3,340	10'11"						
Single grouser	600	24	40,540	89,390	72.5	10.5	3,340	10'11"						
			<b>EC400F LR, 8.5 m (27'11") boom, 5 m (16'5") arm, 1,080 kg (2,380 lb) bucket, 8,200 kg (18,080 lb) counterweight</b>											

# Specifications

## BUCKET SELECTION GUIDE

Bucket type		Capacity		Cutting width		Weight		Teeth	EC400F L			
									800 mm (32") shoe, 7,250 kg (15,990 lb) counterweight			
		m <sup>3</sup>	yd <sup>3</sup>	mm	ft/in	kg	lb	EA	6.45 m (21'2") boom			
									2.6 m (8'6")	2.6 m (8'6")	3.2 m (10'6")	3.9 m (12'10")
Direct fit Buckets	Fixed Ditching	950	1.24	1,500	4'11"	841	1,854	N	C	C	C	C
	General Purpose	1,420	1.86	1,200	3'11"	1,610	3,549	5	C	C	C	C
		1,670	2.18	1,350	4'5"	1,724	3,802	5	C	C	C	C
		1,920	2.51	1,500	4'11"	1,865	4,111	5	C	C	C	C
		2,330	3.05	1,750	5'9"	1,967	4,336	5	C	C	C	C
	Heavy Duty	1,420	1.86	1,200	3'11"	1,713	3,776	5	D	D	D	D
		1,670	2.18	1,350	4'5"	1,877	4,139	5	D	D	D	D
		1,920	2.51	1,500	4'11"	2,004	4,418	5	D	D	D	D
		2,330	3.05	1,750	5'9"	2,190	4,828	5	D	D	C	B
	Extreme Duty	1,920	2.51	1,530	5'0"	2,368	5,220	4	D	D	D	C
		2,330	3.05	1,780	5'10"	2,617	5,769	4	D	C	C	B
	High Capacity	2,440	3.19	1,600	5'3"	1,796	3,959	5	C	C	C	C
		2,900	3.79	1,840	6'0"	1,969	4,342	5	C	C	B	A
	Bucket type		Capacity		Cutting width		Weight		Teeth	EC400F LR		
800 mm (32") shoe, 8,200 kg (18,080 lb) counterweight												
m <sup>3</sup>			yd <sup>3</sup>	mm	ft/in	kg	lb	EA	8.5 m (27'11") boom			
									5.0 m (16'5") arm			
Direct fit Buckets	Fixed Ditching	950	1.24	1,500	4'11"	796	1,755	N	C			
	General Purpose	1,400	1.83	1,495	4'11"	1,079	2,379	6	C			

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> (3,540 lb/yd<sup>3</sup>)

C: 1,800 kg/m<sup>3</sup> (3,035 lb/yd<sup>3</sup>)

B: 1,500 kg/m<sup>3</sup> (2,525 lb/yd<sup>3</sup>)

A: 1,200 kg/m<sup>3</sup> (2,020 lb/yd<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 (5 ft)		3.0 m (10 ft)		4.5 m (15 ft)		6.0 m (20 ft)		7.5 m (25 ft)		9.0 m (30 ft)		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	
Boom 6.2 m (20'4") Arm 2.6 m (8'6") Shoe 800 m (32") Counterweight 7,250 kg (15,990 lb)	7.5 m kg							*10,680	*10,680					*10,840	10,620	6.7 m
	25 ft lb							*23,610	*23,610					*23,970	*23,970	21.6 ft
	6 m kg							*11,190	*11,190	*10,700	8,770			*10,720	8,430	7.7 m
	20 ft lb							*24,420	*24,420	*23,640	18,810			*23,640	18,790	25 ft
	4.5 m kg					*15,780	*15,780	*12,620	12,090	*11,150	8,590			*10,820	7,350	8.3 m
	15 ft lb					*33,920	*33,920	*27,360	26,080	*24,350	18,510			*23,840	16,280	27.1 ft
	3 m kg					*19,660	17,480	*14,390	11,510	*11,970	8,330			10,520	6,820	8.6 m
	10 ft lb					*42,260	37,730	*31,150	24,840	*26,050	17,950			23,230	15,060	28.1 ft
	1.5 m kg					*22,140	16,610	*15,890	11,030	12,660	8,070			10,340	6,670	8.6 m
	5 ft lb					*47,840	35,810	*34,420	23,800	27,260	17,420			22,800	14,710	28.2 ft
	0 m kg					*22,670	16,320	*16,650	10,750	12,480	7,910			10,710	6,870	8.3 m
	0 ft lb					*49,170	35,130	*36,100	23,190	26,870	17,080			23,610	15,140	27.3 ft
	-1.5 m kg			*17,770	*17,770	*21,860	16,340	*16,460	10,680	12,460	7,900			11,740	7,530	7.8 m
	-5 ft lb			*40,440	*40,440	*47,450	35,150	*35,660	23,040	26,860	17,070			26,100	16,630	25.5 ft
	-3 m kg			*26,280	*26,280	*19,710	16,580	*14,950	10,830					*12,440	9,030	6.9 m
-10 ft lb			*57,090	*57,090	*42,670	35,680	*32,190	23,380					*27,440	20,080	22.5 ft	
-4.5 m kg					*15,190	*15,190							*12,170	*12,170	5.4 m	
-15 ft lb					*32,280	*32,280							*26,720	*26,720	17.5 ft	
Boom 6.45 m (21'2") Arm 3.2 m (10'6") Shoe 800 m (32") Counterweight 7,250 kg (15,990 lb)	7.5 m kg									*9,320	9,010			*8,200	*8,200	7.7 m
	25 ft lb													*18,150	*18,150	24.9 ft
	6 m kg									*9,440	8,940			*7,990	7,190	8.5 m
	20 ft lb									*20,710	19,230			*17,600	16,010	27.8 ft
	4.5 m kg					*14,270	*14,270	*11,540	*11,540	*10,190	8,690	*8,780	6,480	*8,060	6,400	9.1 m
	15 ft lb					*30,650	*30,650	*25,010	*25,010	*22,210	18,720			*17,740	14,170	29.7 ft
	3 m kg					*18,310	17,680	*13,480	11,590	*11,200	8,360	9,770	6,340	*8,380	5,980	9.3 m
	10 ft lb					*39,340	38,160	*29,160	25,010	*24,340	18,030	21,030	13,650	*18,460	13,210	30.6 ft
	1.5 m kg					*21,280	16,620	*15,200	11,020	*12,170	8,050	9,610	6,190	*9,010	5,850	9.4 m
	5 ft lb					*45,940	35,830	*32,910	23,790	*26,430	17,370	20,690	13,350	*19,840	12,900	30.7 ft
	0 m kg					*22,420	16,170	*16,270	10,660	12,400	7,830	9,500	6,090	9,310	5,970	9.1 m
	0 ft lb					*48,560	34,800	*35,250	23,000	26,700	16,900			20,520	13,170	29.9 ft
	-1.5 m kg			*15,100	*15,100	*22,170	16,090	*16,490	10,520	12,290	7,730			10,050	6,420	8.6 m
	-5 ft lb			*34,170	*34,170	*48,100	34,600	*35,750	22,680	26,480	16,690			22,200	14,180	28.3 ft
	-3 m kg	*17,580	*17,580	*23,830	*23,830	*20,770	16,230	*15,730	10,570	*12,150	7,800			*11,400	7,400	7.8 m
-10 ft lb	*39,400	*39,400	*54,010	*54,010	*45,000	34,930	*34,010	22,800	*26,070	16,870			*25,170	16,410	25.6 ft	
-4.5 m kg			*24,040	*24,040	*17,800	16,620	*13,350	10,850					*11,700	9,600	6.6 m	
-15 ft lb			*51,800	*51,800	*38,270	35,790	*28,440	23,460					*25,810	21,530	21.3 ft	
Boom 6.45 m (21'2") Arm 3.9 m (12'10") Shoe 800 m (32") Counterweight 7,250 kg (15,990 lb)	9.0 m kg													*6,920	*6,920	7.2 m
	30 ft lb													*15,400	*15,400	23.3 ft
	7.5 m kg									*8,080	*8,080			*6,460	*6,460	8.4 m
	25 ft lb									*17,900	*17,900			*14,300	*14,300	27.4 ft
	6 m kg									*8,430	*8,430	*7,670	6,660	*6,310	*6,310	9.2 m
	20 ft lb									*18,480	*18,480	*14,590	14,280	*13,920	*13,920	30.1 ft
	4.5 m kg							*10,290	*10,290	*9,270	8,790	*8,740	6,550	*6,360	5,720	9.7 m
	15 ft lb							*22,300	*22,300	*20,220	18,940	*19,180	14,070	*14,010	12,670	31.9 ft
	3 m kg					*16,240	*16,240	*12,320	11,760	*10,390	8,420	*9,310	6,360	*6,590	5,370	10 m
	10 ft lb					*34,930	*34,930	*26,660	25,380	*22,580	18,160	*20,330	13,690	*14,520	11,870	32.7 ft
	1.5 m kg					*19,790	16,860	*14,270	11,100	*11,510	8,060	9,590	6,160	*7,030	5,250	10 m
	5 ft lb					*42,710	36,340	*30,890	23,950	*24,990	17,380	20,650	13,270	*15,480	11,570	32.8 ft
	0 m kg			*9,310	*9,310	*21,750	16,130	*15,670	10,630	12,350	7,770	9,420	6,000	*7,750	5,330	9.8 m
	0 ft lb			*21,190	*21,190	*47,080	34,730	*33,950	22,920	26,590	16,760	20,290	12,940	*17,080	11,750	32.1 ft
	-1.5 m kg	*9,500	*9,500	*14,210	*14,210	*22,210	15,870	*16,290	10,380	12,170	7,610	9,330	5,930	8,880	5,650	9.3 m
-5 ft lb	*21,200	*21,200	*32,100	*32,100	*48,150	34,130	*35,320	22,380	26,200	16,410	20,130	12,800	19,610	12,490	30.6 ft	
-3 m kg	*14,810	*14,810	*20,540	*20,540	*21,450	15,900	*16,030	10,340	12,140	7,590			10,030	6,360	8.6 m	
-10 ft lb	*33,170	*33,170	*46,470	*46,470	*46,480	34,200	*34,700	22,300	26,170	16,390			22,230	14,100	28.1 ft	
-4.5 m kg	*21,170	*21,170	*27,100	*27,100	*19,320	16,180	*14,560	10,510					*10,940	7,830	7.5 m	
-15 ft lb	*47,640	*47,640	*58,500	*58,500	*41,680	34,830	*31,300	22,700					*24,170	17,490	24.3 ft	
-6.0 m kg			*20,440	*20,440	*14,890	14,890							*11,110	*11,110	5.8 m	
-20 ft lb			*43,330	*43,330	*31,400	31,400							*24,450	*24,450	18.4 ft	

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 LR

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		
		Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	
Boom 8.5 m (27'11") Arm 5.0 m (16'5") Shoe 800 mm (32") Counterweight 8,200 kg (18,080 lb)	10.5 m	kg										
	35 ft	lb										
	9.0 m	kg										
	30 ft	lb										
	7.5 m	kg										
	25 ft	lb										
	6 m	kg										
	20 ft	lb										
	4.5 m	kg									*7,460	*7,460
	15 ft	lb									*16,140	*16,140
	3 m	kg							*11,010	*11,010	*8,720	8,500
	10 ft	lb							*23,700	*23,700	*18,860	18,360
	1.5 m	kg							*12,900	*10,770	*9,920	7,980
	5 ft	lb							*27,820	23,280	*21,460	17,230
	0 m	kg							*14,210	10,220	*10,890	7,590
	0 ft	lb										
	-1.5 m	kg					*16,810	*16,810	*30,730	22,070	*23,580	16,380
	-5 ft	lb					*9,570	*9,570	*14,930	9,950	*11,540	7,340
	-3 m	kg	*6,800	*6,800	*8,450	*8,450	*12,850	*12,850	*15,140	9,870	*11,860	7,230
	-10 ft	lb	*15,250	*15,250	*19,080	*19,080	*29,290	*29,290	*32,820	21,270	25,560	15,600
	-4.5 m	kg	*9,980	*9,980	*12,110	*12,110	*17,150	15,410	*14,890	9,920	*11,800	7,230
	-15 ft	lb	*22,400	*22,400	*27,360	*27,360	*39,140	33,140	*32,260	21,400	*25,550	15,620
	-6.0 m	kg	*13,580	*13,580	*16,540	*16,540	*18,380	15,740	*14,130	10,110	*11,280	7,360
-20 ft	lb	*30,580	*30,580	*37,510	*37,510	*39,740	33,880	*30,520	21,820	*24,350	15,900	
-7.5 m	kg			*22,270	*22,270	*16,240	16,240	*12,630	10,440	*10,040	7,630	
-25 ft	lb			*47,780	*47,780	*34,870	*34,870	*27,080	22,580	*21,410	16,530	
-9.0 m	kg					*12,630	*12,630	*9,710	*9,710			
-30 ft	lb					*26,450	*26,450	*20,070	*20,070			
Boom 8.5 m (27'11") Arm 5.0 m (16'5") Shoe 800 mm (32") Counterweight 8,200 kg (18,080 lb)	Lifting hook related to ground level	9.0 m		10.5 m		12 m		Max.				
		Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC			
	10.5 m	kg							*5,430	*5,430	10.1 m	
	35 ft	lb							*12,060	*12,060	32.7 ft	
	9.0 m	kg			*5,320	*5,320			*5,160	5,060	11.2 m	
	30 ft	lb			*11,860	*11,860			*11,430	11,340	36.4 ft	
	7.5 m	kg			*5,400	*5,400			*5,040	4,420	12 m	
	25 ft	lb			*11,890	*11,890			*11,120	9,830	39.2 ft	
	6 m	kg	*5,930	*5,930	*5,700	5,570	*5,630	4,370	*5,010	3,990	12.6 m	
	20 ft	lb	*12,930	*12,930	*12,480	11,970	*12,430	9,360	*11,050	8,850	41.1 ft	
	4.5 m	kg	*6,640	*6,640	*6,140	5,370	*5,860	4,270	*5,080	3,710	12.9 m	
	15 ft	lb	*14,430	*14,430	*13,400	11,560	*12,860	9,170	*11,180	8,200	42.4 ft	
	3 m	kg	*7,440	6,520	*6,660	5,150	*6,180	4,150	*5,220	3,540	13.1 m	
	10 ft	lb	*16,150	14,070	*14,500	11,100	*13,510	8,910	*11,500	7,810	43 ft	
	1.5 m	kg	*8,230	6,190	*7,190	4,940	6,330	4,020	*5,460	3,460	13.1 m	
	5 ft	lb	*17,860	13,350	*15,630	10,650	13,630	8,640	*12,030	7,630	43.1 ft	
	0 m	kg	*8,920	5,920	7,550	4,760	6,220	3,910	5,540	3,470	13 m	
	0 ft	lb	*19,350	12,770	16,270	10,270	13,390	8,410	12,220	7,650	42.6 ft	
	-1.5 m	kg	9,220	5,740	7,410	4,640	6,140	3,840	5,720	3,570	12.6 m	
	-5 ft	lb	19,880	12,380	15,980	10,000	13,250	8,280	12,620	7,880	41.4 ft	
	-3 m	kg	9,120	5,640	7,350	4,580	6,140	3,830	6,070	3,790	12.1 m	
	-10 ft	lb	19,660	12,180	15,860	9,880			13,430	8,390	39.6 ft	
	-4.5 m	kg	9,120	5,640	7,380	4,600			6,680	4,190	11.3 m	
-15 ft	lb	19,670	12,190	15,940	9,960			14,820	9,290	37.1 ft		
-6.0 m	kg	*9,190	5,750					*7,600	4,870	10.3 m		
-20 ft	lb	*19,760	12,450					*16,800	10,860	33.5 ft		
-7.5 m	kg							*7,910	6,130	8.9 m		
-25 ft	lb							*17,500	13,850	28.8 ft		
-9.0 m	kg							*8,060	*8,060	6.9 m		
-30 ft	lb							*17,750	*17,750	21.8 ft		

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.

**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 (5 ft)		3.0 m (10 ft)		4.5 m (15 ft)		6.0 m (20 ft)		7.5 m (25 ft)		9.0 m (30 ft)		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	
Boom 6.2 m (20'4") Arm 2.6 m (8'6") Shoe 900 m (36") Counterweight 7,250 kg (15,990 lb)	7.5 m kg							*10,680	*10,680					*10,840	10,720	6.7 m
	25 ft lb							*23,610	*23,610					*23,970	*23,970	21.6 ft
	6 m kg							*11,190	*11,190	*10,700	8,850			*10,720	8,500	7.7 m
	20 ft lb							*24,420	*24,420	*23,640	18,990			*23,640	18,970	25.0 ft
	4.5 m kg					*15,780	*15,780	*12,620	12,200	*11,150	8,680			*10,820	7,420	8.3 m
	15 ft lb					*33,920	*33,920	*27,360	26,320	*24,350	18,690			*23,840	16,440	27.0 ft
	3 m kg					*19,660	17,640	*14,390	11,620	*11,970	8,410			10,630	6,890	8.6 m
	10 ft lb					*42,260	38,080	*31,150	25,080	*26,050	18,130			23,470	15,220	28.1 ft
	1.5 m kg					*22,140	16,770	*15,890	11,140	*12,760	8,150			10,450	6,740	8.6 m
	5 ft lb					*47,840	36,150	*34,420	24,030	27,540	17,590			23,040	14,860	28.2 ft
	0 m kg					*22,670	16,480	*16,650	10,860	12,610	7,990			10,820	6,940	8.3 m
	0 ft lb					*49,170	35,480	*36,100	23,420	27,160	17,250			23,860	15,300	27.3 ft
	-1.5 m kg			*17,770	*17,770	*21,860	16,500	*16,460	10,790	12,590	7,980			11,930	7,600	7.8 m
	-5 ft lb			*40,440	*40,440	*47,450	35,500	*35,660	23,270	27,140	17,240			26,370	16,800	25.5 ft
	-3 m kg			*26,280	*26,280	*19,710	16,740	*14,950	10,940					*12,440	9,120	6.9 m
	-10 ft lb			*57,090	*57,090	*42,670	36,030	*32,190	23,620					*27,440	20,280	22.5 ft
-4.5 m kg					*15,190	*15,190							*12,170	*12,170	5.4 m	
-15 ft lb					*32,280	*32,280							*26,720	*26,720	17.5 ft	
Boom 6.45 m (21'2") Arm 3.2 m (10'6") Shoe 900 m (36") Counterweight 7,250 kg (15,990 lb)	7.5 m kg									*9,320	9,090			*8,200	*8,200	7.7 m
	25 ft lb													*18,150	*18,150	24.9 ft
	6 m kg									*9,440	9,020			*7,990	7,260	8.5 m
	20 ft lb									*20,710	19,410			*17,600	16,170	27.8 ft
	4.5 m kg					*14,270	*14,270	*11,540	*11,540	*10,190	8,770	*8,780	6,540	*8,060	6,460	9.1 m
	15 ft lb					*30,650	*30,650	*25,010	*25,010	*22,210	18,890			*17,740	14,310	29.7 ft
	3 m kg					*18,310	17,840	*13,480	11,690	*11,200	8,440	9,880	6,410	*8,380	6,040	9.3 m
	10 ft lb					*39,340	38,510	*29,160	25,240	*24,340	18,200	21,250	13,790	*18,460	13,350	30.6 ft
	1.5 m kg					*21,280	16,780	*15,200	11,130	*12,170	8,130	9,710	6,260	*9,010	5,910	9.4 m
	5 ft lb					*45,940	36,180	*32,910	24,020	*26,430	17,550	20,920	13,490	*19,840	13,030	30.7 ft
	0 m kg					*22,420	16,330	*16,270	10,770	12,530	7,910	9,600	6,150	9,410	6,040	9.1 m
	0 ft lb					*48,560	35,150	*35,250	23,230	26,980	17,070			20,740	13,310	30.0 ft
	-1.5 m kg			*15,100	*15,100	*22,170	16,250	*16,490	10,630	12,420	7,820			10,160	6,490	8.6 m
	-5 ft lb			*34,170	*34,170	*48,100	34,950	*35,750	22,920	26,760	16,870			22,440	14,330	28.3 ft
	-3 m kg	*17,580	*17,580	*23,830	*23,830	*20,770	16,390	*15,730	10,680	*12,150	7,880			*11,400	7,470	7.8 m
	-10 ft lb	*39,400	*39,400	*54,010	*54,010	*45,000	35,270	*34,010	23,030	*26,070	17,050			*25,170	16,580	25.6 ft
-4.5 m kg			*24,040	*24,040	*17,800	16,780	*13,350	10,960					*11,700	9,690	6.6 m	
-15 ft lb			*51,800	*51,800	*38,270	36,140	*28,440	23,690					*25,810	21,750	21.3 ft	
Boom 6.45 m (21'2") Arm 3.9 m (12'10") Shoe 900 m (36") Counterweight 7,250 kg (15,990 lb)	9.0 m kg													*6,920	*6,920	7.2 m
	30 ft lb													*15,400	*15,400	23.3 ft
	7.5 m kg									*8,080	*8,080			*6,460	*6,460	8.4 m
	25 ft lb									*17,900	*17,900			*14,300	*14,300	27.4 ft
	6 m kg									*8,430	*8,430	*7,670	6,730	*6,310	*6,310	9.2 m
	20 ft lb									*18,480	*18,480	*14,590	14,420	*13,920	*13,920	30.1 ft
	4.5 m kg							*10,290	*10,290	*9,270	8,870	*8,740	6,610	*6,360	5,780	9.7 m
	15 ft lb							*22,300	*22,300	*20,220	19,120	*19,180	14,210	*14,010	12,800	31.9 ft
	3 m kg					*16,240	*16,240	*12,320	11,870	*10,390	8,500	*9,310	6,420	*6,590	5,430	10.0 m
	10 ft lb					*34,930	*34,930	*26,660	25,610	*22,580	18,330	*20,330	13,830	*14,520	11,990	32.7 ft
	1.5 m kg					*19,790	17,020	*14,270	11,210	*11,510	8,140	9,690	6,230	*7,030	5,300	10.0 m
	5 ft lb					*42,710	36,690	*30,890	24,180	*24,990	17,550	20,870	13,410	*15,480	11,700	32.8 ft
	0 m kg			*9,310	*9,310	*21,750	16,290	*15,670	10,740	*12,390	7,850	9,520	6,070	*7,750	5,390	9.8 m
	0 ft lb			*21,190	*21,190	*47,080	35,070	*33,950	23,150	26,870	16,940	20,510	13,080	*17,080	11,880	32.1 ft
	-1.5 m kg	*9,500	*9,500	*14,210	*14,210	*22,210	16,030	*16,290	10,490	12,300	7,690	9,440	5,990	*8,920	5,720	9.3 m
	-5 ft lb	*21,200	*21,200	*32,100	*32,100	*48,150	34,480	*35,320	22,620	26,480	16,590	20,350	12,940	*19,700	12,630	30.6 ft
-3 m kg	*14,810	*14,810	*20,540	*20,540	*21,450	16,060	*16,030	10,450	12,270	7,670			*10,140	6,430	8.6 m	
-10 ft lb	*33,170	*33,170	*46,470	*46,470	*46,480	34,550	*34,700	22,540	26,450	16,560			22,470	14,250	28.1 ft	
-4.5 m kg	*21,170	*21,170	*27,100	*27,100	*19,320	16,340	*14,560	10,620					*10,940	7,910	7.5 m	
-15 ft lb	*47,640	*47,640	*58,500	*58,500	*41,680	35,180	*31,300	22,930					*24,170	17,670	24.3 ft	
-6.0 m kg			*20,440	*20,440	*14,890	*14,890							*11,110	*11,110	5.8 m	
-20 ft lb			*43,330	*43,330	*31,400	*31,400							*24,450	*24,450	18.4 ft	

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 LR

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 (5 ft)		3.0 m (10 ft)		4.5 m (15 ft)		6.0 m (20 ft)		7.5 m (25 ft)		
		Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	
Boom 8.5 m (27'11") Arm 5.0 m (16'5") Shoe 900 mm (36") Counterweight 8,200 kg (18,080 lb)	10.5 m kg											
	35 ft lb											
	9.0 m kg											
	30 ft lb											
	7.5 m kg											
	25 ft lb											
	6 m kg											
	20 ft lb											
	4.5 m kg										*7,460	*7,460
	15 ft lb										*16,140	*16,140
	3 m kg								*11,010	*11,010	*8,720	8,580
	10 ft lb								*23,700	*23,700	*18,860	18,530
	1.5 m kg								*12,900	10,880	*9,920	8,060
	5 ft lb								*27,820	23,510	*21,460	17,410
	0 m kg								*14,210	10,330	*10,890	7,670
	0 ft lb						*16,810	*16,810	*30,730	22,300	*23,580	16,550
	-1.5 m kg						*9,570	*9,570	*14,930	10,060	*11,540	7,420
	-5 ft lb						*21,900	*21,900	*32,340	21,690	*25,020	16,010
	-3 m kg	*6,800	*6,800	*8,450	*8,450	*12,850	*12,850	*15,140	9,970	*11,860	7,310	
	-10 ft lb	*15,250	*15,250	*19,080	*19,080	*29,290	*29,290	*32,820	21,500	*25,700	15,770	
	-4.5 m kg	*9,980	*9,980	*12,110	*12,110	*17,150	15,570	*14,890	10,030	*11,800	7,320	
	-15 ft lb	*22,400	*22,400	*27,360	*27,360	*39,140	33,490	*32,260	21,630	*25,550	15,790	
	-6.0 m kg	*13,580	*13,580	*16,540	*16,540	*18,380	15,900	*14,130	10,220	*11,280	7,440	
-20 ft lb	*30,580	*30,580	*37,510	*37,510	*39,740	34,220	*30,520	22,050	*24,350	16,070		
-7.5 m kg			*22,270	*22,270	*16,240	*16,240	*12,630	10,550	*10,040	7,710		
-25 ft lb			*47,780	*47,780	*34,870	*34,870	*27,080	22,810	*21,410	16,700		
-9.0 m kg					*12,630	*12,630	*9,710	*9,710				
-30 ft lb					*26,450	*26,450	*20,070	*20,070				
Boom 8.5 m (27'11") Arm 5.0 m (16'5") Shoe 900 mm (36") Counterweight 8,200 kg (18,080 lb)	10.5 m kg							*5,430	*5,430	10.1 m		
	35 ft lb							*12,060	*12,060	32.7 ft		
	9.0 m kg			*5,320	*5,320			*5,160	5,110	11.2 m		
	30 ft lb			*11,860	*11,860			*11,430	*11,430	36.4 ft		
	7.5 m kg			*5,400	*5,400			*5,040	4,460	12.0 m		
	25 ft lb			*11,890	*11,890			*11,120	9,940	39.2 ft		
	6 m kg	*5,930	*5,930	*5,700	5,620	*5,630	4,420	*5,010	4,030	12.6 m		
	20 ft lb	*12,930	*12,930	*12,480	12,090	*12,430	9,470	*11,050	8,950	41.1 ft		
	4.5 m kg	*6,640	*6,640	*6,140	5,430	*5,860	4,320	*5,080	3,750	12.9 m		
	15 ft lb	*14,430	*14,430	*13,400	11,680	*12,860	9,270	*11,180	8,300	42.4 ft		
	3 m kg	*7,440	6,580	*6,660	5,210	*6,180	4,190	*5,220	3,580	13.1 m		
	10 ft lb	*16,150	14,210	*14,500	11,220	*13,510	9,010	*11,500	7,900	43.0 ft		
	1.5 m kg	*8,230	6,250	*7,190	4,990	6,400	4,060	*5,460	3,500	13.1 m		
	5 ft lb	*17,860	13,500	*15,630	10,760	13,790	8,740	*12,030	7,720	43.1 ft		
	0 m kg	*8,920	5,990	7,630	4,820	6,290	3,950	5,610	3,510	13.0 m		
	0 ft lb	*19,350	12,910	16,450	10,380	13,550	8,510	12,360	7,740	42.6 ft		
	-1.5 m kg	9,320	5,800	7,500	4,690	6,210	3,880	5,790	3,610	12.6 m		
	-5 ft lb	20,100	12,520	16,170	10,120	13,400	8,380	12,770	7,980	41.4 ft		
	-3 m kg	9,220	5,710	7,430	4,630	6,210	3,880	6,140	3,840	12.1 m		
	-10 ft lb	19,880	12,320	16,040	10,000			13,580	8,490	39.6 ft		
	-4.5 m kg	9,220	5,710	7,460	4,660			6,760	4,240	11.3 m		
	-15 ft lb	19,890	12,330	16,120	10,070			14,990	9,400	37.1 ft		
	-6.0 m kg	*9,190	5,820					*7,600	4,920	10.3 m		
-20 ft lb	*19,760	12,590					*16,800	10,990	33.5 ft			
-7.5 m kg							*7,910	6,200	8.9 m			
-25 ft lb							*17,500	14,000	28.8 ft			
-9.0 m kg							*8,060	*8,060	6.9 m			
-30 ft lb							*17,750	*17,750	21.8 ft			

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 NA T4f 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
High capacity (tropical) cooling	•
Pre-cleaner, oil bath	o
Air filter, High efficiency (EON)	o
Delayed engine Shutdown	•
Automatic engine shutdown	o
Water separator with heater	•
Arctic regeneration	o
Regeneration control	o
Oil sampling for engine oil	•

### 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	•
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	•
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 (24/28/32/36") triple grouser shoe	o
Link 600 mm (24") triple grouser shoe, HD	o
Link 600 mm (24") double grouser shoe	o
Full track guard	o
Track tensioner,sand protect	o
Removable counterweight	o
Counterweight for Long reach	o

## STANDARD AND OPTIONAL EQUIPMENT

• = Standard / o = Optional

### 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	•
Boom float function	•
Straight travel pedal	•
Comfort driving control	o
Creep mode	•
Provision, Magnet application	o
Dust suppression system	o
Dedicated drain line	o
Variable X3 P-Q control	o
Hose rupture valve for boom	o
Hose rupture valve for arm	o

### 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	•
Air pressure supply in cabin	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, 3 inch 2 point / 2 inch 3 point	o
Climate control-HEPA filter	o
Radio with MP3/USB/Bluetooth	o
Front rain shield	o
Sun screen	•
Lower wiper	o
Sun shield, roof hatch	o
Foot rest, High mount	•
FOG (Falling Object Guard)	o
FOPS (Falling Object Protection Structure)	o
Safety net	o

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**STANDARD AND OPTIONAL EQUIPMENT**

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• = Standard / o = Optional

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**Digging equipment**

6.45 m (21'2") HD	•
6.2 m (20'4") ME / 8.5 m (27'11") LR / Non-Boom	•
3.2 m (10'6") HD	o
2.6 m (8'6") ME / 3.9 m (12'10") GP / 5.0 m (16'5") LR / Non-Arm	o

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**Machine controls**

Kinematic sensor package	•
Volvo Co-Pilot 2nd display, 12.8" touchable Full HD	•
Dig Assist, Start	•
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	•

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**Safety and security**

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

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**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	•
Quick Engine Oil Change	•
Jump start connector	o
Auto lubrication system	o
Tool kit	o

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**V O L V O**