

VOLVO EXCAVATOR

# ECR305C

33.8 - 37.0 t, 194 metric hp



# SEE HOW IT FITS YOUR WORK.

## MORE SAFETY.

- **Volvo Care Cab** with operator protective structure.
- **Anti-slip, punched steel steps/platforms:** superior grip and safety.
- **Low engine emission levels and low noise.**
- **Lead-free exterior paint** is in harmony with the environment.
- **Cab door slides neatly along the cab,** staying within the track width.

## MORE PRODUCTIVITY.

- **Class-leading stability** for powerful lifting performance.
- **Smooth combination boom/arm operation:** even during travel.
- **Dependable lifting capacity:** handles the work of similar, conventional excavators.
- **Fine, precise control:** do it easily, do it quickly, do it right.
- **Powerful Tier 3/Stage IIIA Volvo engine:** dependable performance.
- **Volvo quick fit:** flexible compatibility and easy attachment change out.
- **Optional dozer blade:** high blade departure angle allows for steep slope climbing.





## MORE COMFORT.

- **Volvo Care Cab:** comfort you expect.
- **High-capacity climate control system.**
- **Vibration dampening:** reduced whole body vibration and fatigue.
- **Adjustable consoles:** easily find the right operating position.

## MORE INNOVATION.

- **Short swing radius:** work in confined areas or one lane of traffic.
- **Excellent center of gravity for balance:** including on slopes.
- **Advanced hydraulic system:** efficient, smooth control.
- **Industry-leading fuel efficiency.**
- **Rounded cab shape:** roomy, optimized design stays inside the swing radius.

## MORE UPTIME.

- **Simplified, ground-level service access.**
- **Easy access, centralized lubrication points.**
- **In-cab monitoring** through the easy-to-read, **color LCD monitor.**

## MORE QUALITY.

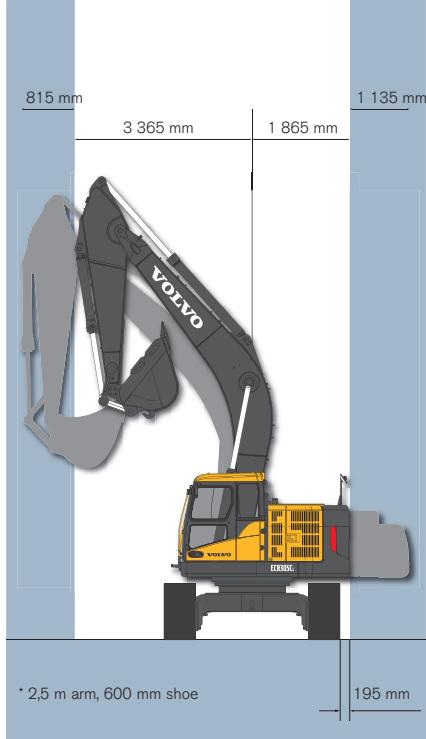
- **Volvo durability built in:** forged steel top rollers, strengthened track guard, greased/sealed track link.
- **Strong undercarriage frame:** endures daily abuse.
- **Reinforced superstructure:** double welded stress points.

# A TURN FOR THE BETTER.

Confined areas now seem a lot less confining. That's because you are free to work in your Volvo ECR305CL. One lane of traffic. Next to buildings on busy streets. Between utility poles. You can go where the work is, and you can handle it all with the power, lift capacity and stability you demand. The Volvo ECR305CL is the short swing radius machine that 30-ton-excavator owners should turn to for commanding performance.

#### Short swing radius

- The performance of a 30-ton conventional excavator – with the flexibility of a short swing radius.
- Versatility for operation in one lane of traffic, confined jobsites or open areas.



#### Access the profits

- Operate in or next to streets with minimal traffic disruption.
- More safety next to buildings, people or other site obstructions: less risk of machine damage.
- Maximum digging reach increases capabilities; decreases machine repositioning.

#### Never short on performance

- A heavy counterweight and excellent center of gravity.
- The short swing radius machine with class-leading stability.
- A wide working range, powerful lifting capacity and dependable power.
- Advanced hydraulic system for efficient, smooth control.

#### Volvo Care Cab comfort

- Optimized cab space is roomy for the operator, yet designed to stay within the swing radius.
- High-capacity climate control system: operator comfort from cab floor to ceiling.





# TURNING CONFIDENCE – INTO PROFIT.

At every turn – there's more to do. The Volvo ECR305CL is ready. Every full bucket, every swing, every load is executed with smoothness, precision and comfort.

For those in civil engineering, piping, material handling and more, the Volvo ECR305CL will help you confidently turn the work that you perform into greater profit.

#### The stable one

- Optimum capacity and stability, comparable with conventional machines.
- Heavy counterweight and excellent center of gravity.
- Designed to offer comparable stability/balance as a conventional machine when swinging on slopes – and performing on flat terrain.

#### Working smooth and fast

- Class-leading short swing radius lifting capability, swing torque, weight distribution and tractive effort.
- Smooth combination boom/arm operation.
- Machine's computer balances maximum available horsepower to hydraulic output.

#### It fits your work

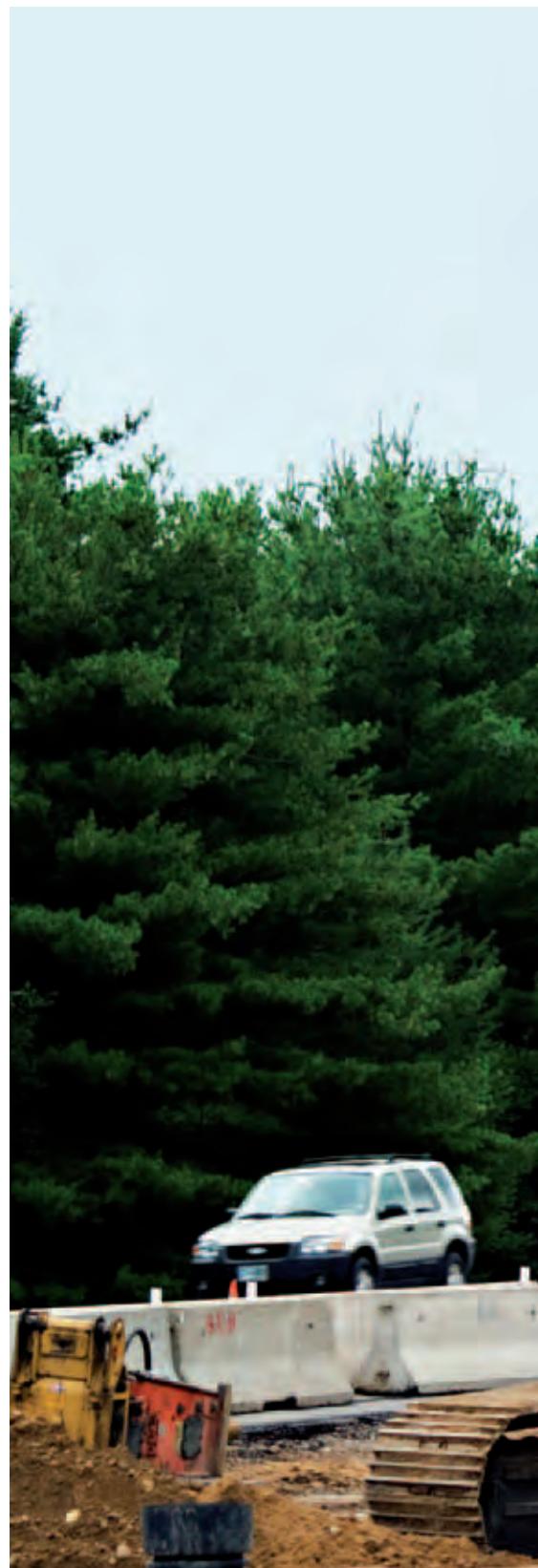
- Works in one lane of traffic: avoiding costly permits or night-only work mandates.
- Volvo quick fit compatibility: easy attachment change out for greater versatility.

#### Precision control

- The combination of power and capacity with fine, precision control.
- Volvo-matched hydraulics deliver optimum productivity, command and less operator fatigue.
- Optional dozer blade features a high blade departure angle that allows steeper slope climbing. Provides extra bracing stability when digging.

#### Application versatility

- **City/public works:** pipe and cable laying, sewer and drainage work.
- **Road works:** road construction, piping and utilities.
- **Industry/Waste handling:** effective inside confined facilities.
- **Site preparation:** the capacity to handle the work and the size to get to it.
- **Demolition:** accessing areas conventional machines can not.





# INTELLIGENT DESIGN. SMART CHOICE.

A quality product doesn't have to be a thing of the past. Volvo believes in it and it's in everything we do. That's why the Volvo ECR305CL is built for durability and reliability. It's not an option – it's standard. And with intelligent all-around access and ease of service, you too will believe that you made the smart choice with Volvo.

#### **Quality you can see and feel**

- Reinforced superstructure, forged steel top roller, strengthened track guard, greased/sealed track link.
- Heavy-duty design and strong components for durability.
- Powerful Tier 3/Stage IIIA Volvo engine.

#### **Access to serviceability**

- Large service openings for easy access/inspection.
- Long hydraulic oil service intervals: standard at 5 000 hours.
- All daily service checks are accessible at ground level – and viewable from the cab monitor.
- Centralized lubrication points and ground-level filter access.
- Approximately 80% commonality of components with Volvo conventional machines: reduced costs and greater availability.

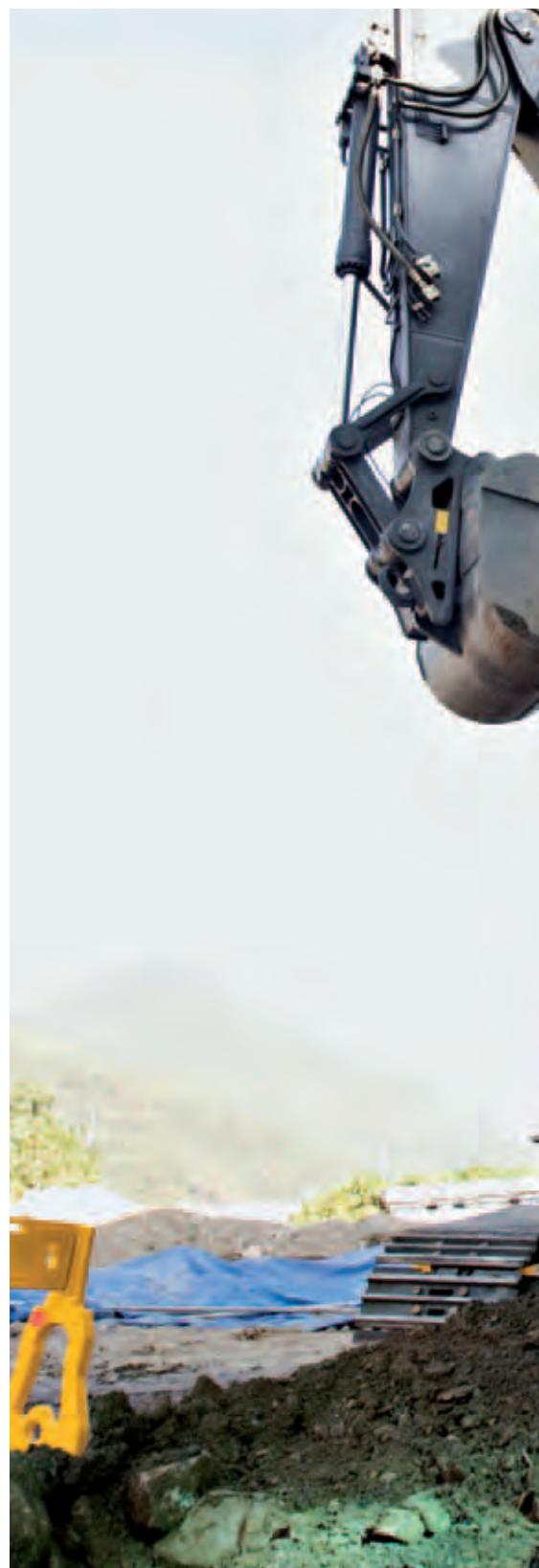
#### **Your Volvo dealer has the support you need:**

##### **CareTrack helps track your machine**

- Optional GPS monitoring and diagnostics program.
- Remotely track machine location, usage, productivity, fuel consumption and more.
- Maximize uptime through important service reminders.

##### **MATRIS gives you a full report**

- Detailed operating history analysis, utilization and efficiency.
- Turns the data captured inside the machine's computer into easy-to-use graphs and reports.
- Check operating techniques, reduce maintenance costs and increase service life.





- Ground level filters access.



- 3-point, multi-purpose access with hand rail for ease and safety.



- Wide open, ground level service area provides easy hydraulic valve access.



# RELAX. IT'S VOLVO.

Get comfortable with doing more. Less fatigue goes a long way toward productivity. The Volvo ECR305CL is the way to do it. The seat of comfort and command. A quiet, safe space. Ease of operability. And with industry-leading fuel efficiency, Volvo helps you stay relaxed knowing that more of your profits are going into your pocket – not your fuel tank.

#### Work longer – in comfort

- High-capacity climate control system.
- Class-leading cab leg room and space, along with a wide shoulder position.
- Spring applied, viscous cab mounting: reduced whole body vibration.
- Low internal and external noise: less fatigue.

#### Operability

- Adjustable consoles make it easy to find the right operating position.
- Simple and easy to operate.
- LCD color monitor is easy to read – even in direct sunlight.
- Easy-lift front windshield – stows securely under the roof line – for plenty of headroom.
- Lower front glass is removable and stores safely inside the cab.

#### Doing the job safely

- Anti-slip, punched steel steps and platforms offer superior grip and safety.
- Opening roof hatch offers an optimal view during high-reach applications.
- Volvo Care Cab with operator protective structure.
- Rear view camera: increased visibility and safety.

#### Environmental safety

- Industry-leading fuel efficiency and low noise/emissions.
- Large windows provide excellent visibility to the front, right-hand side and rear.
- 95% recyclable materials used in the machine.
- Lead-free paint is in harmony with our environment.

#### Volvo: your global, local partner

- Complete solutions since 1927.
- Built on the core values of quality, safety and environmental care.
- Construction equipment, commercial transport, buses, trucks and more.
- Global expertise: development of engines with leading fuel efficiency.





• Plenty of interior foot space and leg room.



• LCD color monitor is bright and easy to read.



• Rear view camera increases safety.



## VOLVO'S ENGINE LEADERSHIP SPANS LAND, SEA, SKY AND SPACE

As the world's second largest manufacturer of 9-to-18-liter diesel engines, Volvo has unmatched expertise designing power systems that move the world. Volvo engines for Volvo Construction Equipment, Volvo

Aero, Volvo Buses, Volvo Penta and Volvo Trucks define productivity and fuel economy. Our performance has been honed on land, over the sea, across the sky and into space. Leading research and development keeps

all Volvo Group products at the forefront of productivity. So when we say Volvo engines are tested — and proven — you can believe it. Trust in it. It's the real advantage of Volvo Power.



# SWING THINGS YOUR WAY.

Make your Volvo Excavator just right for you and your work. To customize your excavator with other optional equipment features to suit your application, contact your local Volvo dealer.

## **Hydraulic kits**

A wide variety of hydraulic kits is available for various boom and arm combinations. Each kit maximizes performance according to the machine's boom and arm length/shape. Get the most out of rotating/tilting attachments, crushers and hammers. Choose between 1 or 2 pump flow for best performance.

## **Hydraulic quick fit**

A Volvo hydraulic quick fit makes changing attachments quick and easy – all from the comfort and safety of the cab. Two different Volvo quick fit types (UQF29, S2) are available to fit new and existing customers' buckets/attachments.

## **Extra work lights**

Extra work lights provide increased visibility, safety and precision, while extending the workday in low light conditions. Features two lights in the front of the machine, one light in the rear area of the cab and one light mounted on the upperstructure.

## **Wrist control joysticks – proportional control**

Low-effort, wrist control joysticks provide smooth, precision control for increased comfort, efficiency and production. Wrist control joysticks with proportional control switches are also available.

## **Operator seats**

Volvo offers a wide variety of ergonomic operator seats designed specifically for comfort and protection. All seats, from various adjustable models to the most advanced air-suspension models, provide excellent support and are individually adjustable to suit operator preferences.

## **Straight travel pedal**

A pedal located by the left foot rest operates both travel motors at the same time, providing convenience when traveling and efficient work control in applications such as pipe laying.

## **Opening top hatch**

Provides increased visibility during high-reach loading operations along with increased cab ventilation.

## **Dozer blade**

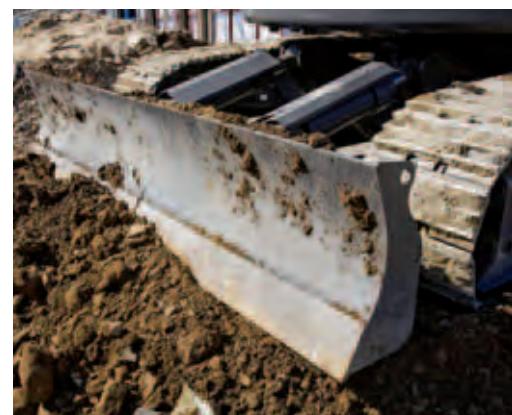
A front-end dozer blade increases machine versatility in job applications such as backfilling trenches and site clean up. It can also be used to level the excavator when working on slopes.

## **Extended greasing bushings**

High quality sintered bushings used on work equipment (excluding bucket) helps lengthen greasing intervals to 500 hours. Extends life, reduces wear on the pins/bushings and reduces maintenance costs.



# VOLVO OPTIONAL EQUIPMENT



**Hydraulic kits**

**Hydraulic quick fit**

**Extra work lights**

**Wrist control joysticks -  
proportional control**

**Operator seats**

**Straight travel pedal**

**Opening top hatch**

**Dozer blade**

**Extended greasing bushing**

**NOTE:** Some features listed as optional equipment are standard equipment in some markets. Some equipment features listed are not available in all markets. Not a complete list of available optional equipment features. See included specification sheet for a complete listing.

# SPECIFICATIONS

## Engine

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

<b>Engine</b>	Volvo D7E EAE3
<b>Max. power, at</b>	30 r/s (1 800 rpm)
<b>Net (ISO 9249, SAE J1349)</b>	143 kW (194 hp)
<b>Gross (SAE J1995)</b>	153 kW (208 hp)
<b>Max. torque at 1 350 rpm</b>	1 350 Nm
<b>No. of cylinders</b>	6
<b>Displacement</b>	7,1 l
<b>Bore</b>	108 mm
<b>Stroke</b>	130 mm

## 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.

<b>Voltage</b>	24 V
<b>Batteries</b>	2 x 12 V
<b>Battery capacity</b>	150 Ah
<b>Alternator</b>	28 V / 80 A

## Service refill capacities

<b>Fuel tank</b>	390 l
<b>Hydraulic system, total</b>	370 l
<b>Hydraulic tank</b>	150 l
<b>Engine oil</b>	30 l
<b>Engine coolant</b>	35 l
<b>Swing reduction unit</b>	6,1 l
<b>Travel reduction unit</b>	2 x 6,8 l

## Swing system

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

<b>Max. swing speed</b>	10,8 rpm
<b>Max. swing torque</b>	117,6 kNm

## Drive

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

<b>Max. drawbar pull</b>	260 kN
<b>Max. travel speed</b>	3,0/4,5 km/h
<b>Gradeability</b>	35°

## Undercarriage

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

<b>Track pads</b>	2 x 48
<b>Link pitch</b>	215,9 mm
<b>Shoe width, triple grouser</b>	600/700/800/850 mm
<b>Shoe width, double grouser HD</b>	600 mm
<b>Bottom rollers</b>	2 x 8
<b>Top rollers</b>	2 x 2

## Hydraulic motors:

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

## Relief valve setting:

Implement .....	32,4/34,3 MPa
Travel circuit .....	34,3 MPa
Swing circuit .....	27,9 MPa
Pilot circuit .....	3,9 MPa

## Hydraulic cylinders:

Mono boom .....	2
Bore x Stroke .....	ø140 x 1 511 mm
Arm .....	1
Bore x Stroke .....	ø150 x 1 745 mm
Bucket .....	1
Bore x Stroke .....	ø140 x 1 140 mm
Dozer Blade .....	2
Bore x Stroke .....	ø165 x 385 mm

## Cab

Purpose-designed, rounded, short radius Volvo Care Cab with operator protective structure. Audio system with remote control. Cup holders. High-capacity outlets at rear panel. Independently adjustable joystick consoles.

Excellent all around-visibility provided through maximum cab glass, transparent roof hatch and 2 openable sliding door window. The lift-up front windshield can easily be secured at the ceiling and the removable lower front glass can be stored inside the cab. Interior lighting consists of one reading light and one cab light connected with door switch.

The pressurized and filtered cab air is supplied by an 8-vent climate-control system, providing fast defrosting and high cooling and heating performance. Viscous/spring-mounted suspension cushions operator from vibrations.

Deluxe seat with adjustable height, tilt, recline, forward-back settings, retractable seat belt.

Adjustable easy-to-read 16,3 cm (**6,4"**) LCD color monitor provides real time information of machine functions, important diagnostic information and a wide variety of work tool settings. LCD monitor is switchable to rear view camera monitor.

## Sound Level:

Sound level in cab according to ISO 6396 .....	LpA 72 dB(A)
External sound level according to ISO 6395 and EU Directive 2000/14/EC .....	LwA 103 dB(A)

## Main pump:

Type: 2 x variable displacement axial piston pumps  
Maximum flow: 2 x 263 l/min

## Pilot pump:

Type: Gear pump  
Maximum flow: 1 x 18 l/min

## Ground pressure

- **ECR305CL** with **6,2 m boom**, 3,05 m arm, 1 166 kg bucket, 8 250 kg counterweight

Description	Shoe width	Operating weight (up to)	Ground pressure	Overall width
Triple grouser	600 mm	33 815 kg	63,7 kPa	3 340 mm
	700 mm	34 460 kg	55,9 kPa	3 440 mm
	800 mm	34 850 kg	49,0 kPa	3 540 mm
	850 mm	35 045 kg	46,1 kPa	3 590 mm
Double grouser	600 mm	34 525 kg	64,7 kPa	3 340 mm

- **ECR305CL** with **dozer blade**, 6,2 m boom, 3,05 m arm, 1 166 kg bucket, 8 250 kg counterweight

Description	Shoe width	Operating weight (up to)	Ground pressure	Overall width
Triple grouser	600 mm	36 325 kg	68,6 kPa	3 340 mm
Double grouser	600 mm	37 035 kg	69,6 kPa	3 340 mm

- **ECR305CL** with **6,2 m boom**, 3,05 m arm, 1 166 kg bucket, 8 700 kg counterweight

Description	Shoe width	Operating weight (up to)	Ground pressure	Overall width
Triple grouser	600 mm	34 115 kg	69,6 kPa	3 340 mm
	700 mm	34 760 kg	60,8 kPa	3 440 mm
	800 mm	35 155 kg	53,9 kPa	3 540 mm
	850 mm	35 345 kg	51,0 kPa	3 590 mm
Double grouser	600 mm	34 825 kg	70,6 kPa	3 340 mm

- **ECR305CL** with **dozer blade**, 6,2 m boom, 3,05 m arm, 1 166 kg bucket, 8 700 kg counterweight

Description	Shoe width	Operating weight (up to)	Ground pressure	Overall width
Triple grouser	600 mm	36 625 kg	74,5 kPa	3 340 mm
Double grouser	600 mm	37 335 kg	75,5 kPa	3 340 mm

### **Max. permitted buckets**

- Note: 1. Bucket size based on ISO 7451, heaped material with a 1:1 angle of repose.  
 2. "Max. permitted sizes" are for reference only and are not necessarily available from the factory.  
 3. Bucket widths are less than bucket's tip radius.

#### • **ECR305CL with direct fit bucket**, 8 250 kg counterweight

Description	Max. bucket volume / weight	6,2 m boom		
		2,55 m HD arm	3,05 m GP arm	3,7 m GP arm
GP bucket 1,5 t/m <sup>3</sup>	l / kg	1 950 / 1 650	1 775 / 1 500	1 575 / 1 325
GP bucket 1,8 t/m <sup>3</sup>	l / kg	1 725 / 1 475	1 575 / 1 325	1 375 / 1 200

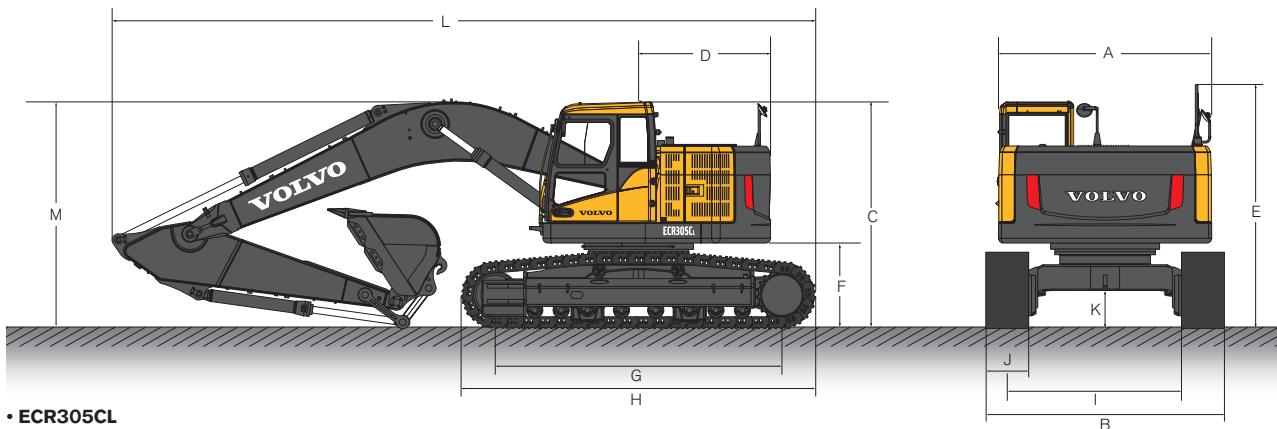
#### • **ECR305CL with S quick fit bucket**, 8 250 kg counterweight

Description	Max. bucket volume / weight	5,7 m boom		
		2,55 m HD arm	3,05 m GP arm	3,7 m GP arm
GP bucket 1,5 t/m <sup>3</sup>	l / kg	1 825 / 1 550	1 650 / 1 400	1 475 / 1 250
GP bucket 1,8 t/m <sup>3</sup>	l / kg	1 625 / 1 375	1 475 / 1 250	1 300 / 1 100

#### • **ECR305CL with U quick fit bucket**, 8 250 kg counterweight

Description	Max. bucket volume / weight	5,7 m boom		
		2,55 m HD arm	3,05 m GP arm	3,7 m GP arm
GP bucket 1,5 t/m <sup>3</sup>	l / kg	1 725 / 1 475	1 575 / 1 325	1 375 / 1 175
GP bucket 1,8 t/m <sup>3</sup>	l / kg	1 550 / 1 300	1 400 / 1 175	1 225 / 1 025

## Dimensions

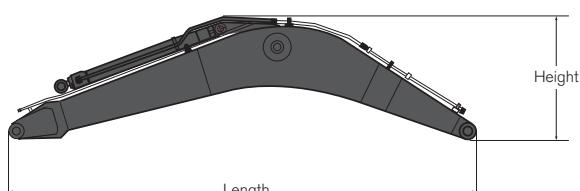


• ECR305CL

Description	Unit	6,2 m boom		
		2,55 m arm	3,05 m arm	3,7 m arm
A. Overall width of upper structure	mm	2 990	2 990	2 990
B. Overall width	mm	3 340	3 340	3 340
C. Overall height of cab	mm	3 180	3 180	3 180
D. Tail swing radius	mm	1 865	1 865	1 865
E. Overall height	mm	3 425	3 425	3 425
F. Counterweight clearance *	mm	1 145	1 145	1 145
G. Tumbler length	mm	4 020	4 020	4 020
H. Track length	mm	4 946	4 946	4 946
I. Track gauge	mm	2 740	2 740	2 740
J. Shoe width	mm	600	600	600
K. Min. ground clearance *	mm	500	500	500
L. Overall length	mm	9 950	9 865	9 890
M. Overall height of boom	mm	3 445	3 305	3 550

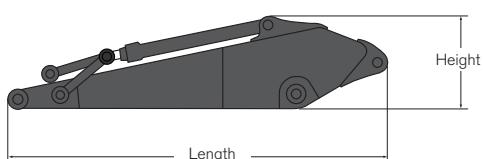
\* Without shoe grouser

### • Boom



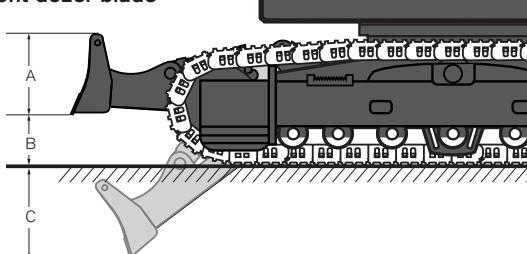
Description	Unit	6,2 m
Length	mm	6 430
Height	mm	1 680
Width	mm	770
Weight	kg	2 480

### • Arm



Description	Unit	2,55 m	3,05 m	3,7 m
Length	mm	3 710	4 150	4 900
Height	mm	1 010	1 010	1 050
Width	mm	545	545	545
Weight	kg	1 475	1 540	1 680

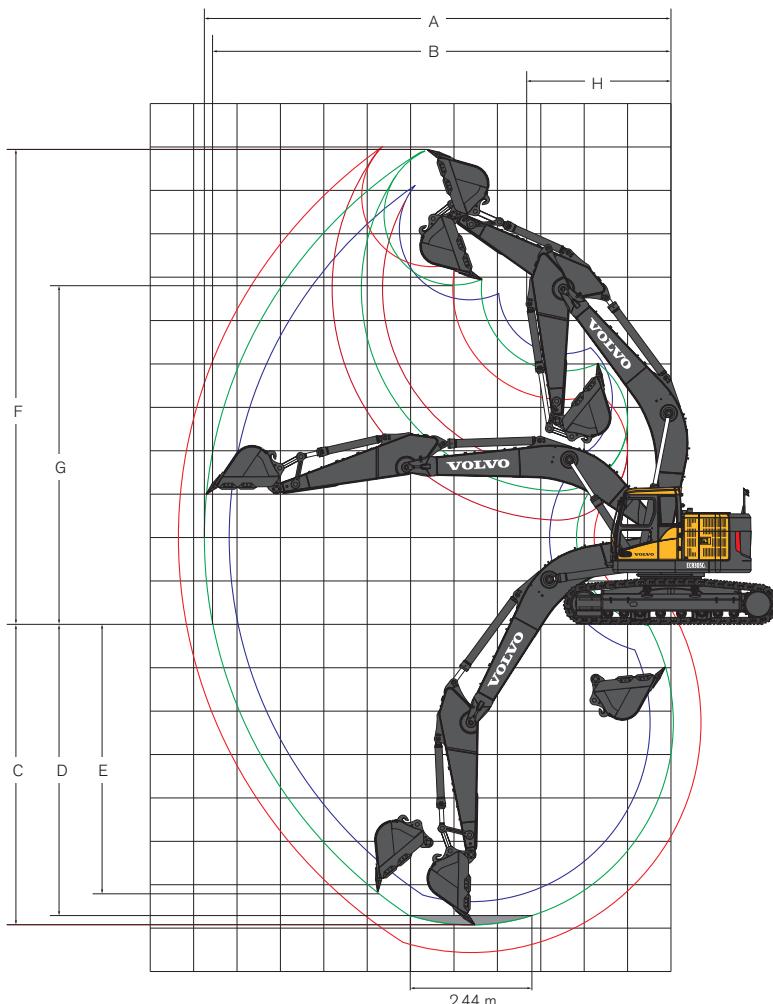
### • Front dozer blade



Description	Unit	Measurement
A. Height	mm	728
B. Width	mm	3 340
Weight	kg	1 496
B. Lift height	mm	820
C. Digging depth	mm	495

\* Only available with 600 mm width shoe

## Working ranges & digging force



• ECR305CL

Machine with direct fit bucket	Unit	6,2 m boom		
		2,55 m arm	3,05 m arm	3,7 m arm
A. Max. digging reach	mm	10 110	10 635	11 240
B. Max. digging reach on ground	mm	9 905	10 445	11 065
C. Max. digging depth	mm	6 460	6 960	7 610
D. Max. digging depth (2,44 m level)	mm	6 260	6 795	7 465
E. Max. vertical wall digging depth	mm	5 600	6 130	6 755
F. Max. cutting height	mm	10 455	10 915	11 285
G. Max. dumping height	mm	7 435	7 855	8 230
H. Min. front swing radius	mm	3 285	3 365	3 340

Digging forces with direct fit bucket	Unit	6,2 m boom		
		2,55 m arm	3,05 m arm	3,7 m arm
Bucket radius	mm	1 600	1 600	1 600
Breakout force - bucket (Normal/Power boost)	SAE J1179	kN	163 / 173	163 / 173
	ISO 6015	kN	187 / 198	187 / 198
Tearout force - arm (Normal/Power boost)	SAE J1179	kN	150 / 159	127 / 135
	ISO 6015	kN	158 / 167	132 / 140
Rotation angle, bucket		179	179	179

## 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 fit from the following values.

- ECR305CL

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.

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### • ECR305CL

 Across undercarriage   Along undercarriage	Lifting hook related to ground level	1,5 m		3,0 m		4,5 m		6,0 m		7,5 m		9,0 m		Max. reach			
																Max. m	
6,2 m boom 2,55 m arm 700 mm shoe 8 250 kg counterweight	9 m kg														*8 640	*8 640	4,72
	7,5 m kg							*7 880	*7 880						*7 950	7 610	6,44
	6 m kg				*9 090	*9 090	*8 130	*8 130							*7 800	5 890	7,49
	4,5 m kg				*11 320	*11 320	*9 090	8 180	*8 040	5 790					7 750	5 070	8,13
	3 m kg				*14 070	11 880	*10 330	7 790	*8 590	5 610					7 180	4 660	8,45
	1,5 m kg				*15 870	11 260	*11 380	7 460	8 470	5 440					7 020	4 530	8,5
	0 m kg				*16 210	11 040	11 670	7 260	8 340	5 320					7 230	4 640	8,28
	-1,5 m kg				*11 520	*11 520	*15 560	11 050	11 610	7 200	8 320	5 300			7 920	5 070	7,77
	-3 m kg				*18 380	*18 380	*13 970	11 200	*10 630	7 290					*8 840	6 050	6,89
	-4,5 m kg						*10 780	*10 780							*8 590	*8 590	5,47
6,2 m boom 3,05 m arm 700 mm shoe 8 250 kg counterweight	9 m kg														*6 440	*6 440	5,62
	7,5 m kg							*7 110	*7 110						*5 720	*5 720	7,13
	6 m kg							*7 500	*7 500	*7 200	5 980				*5 470	5 240	8,08
	4,5 m kg		*14 760	*14 760	*10 320	*10 320	*8 510	8 290	*7 600	5 850					*5 460	4 590	8,68
	3 m kg				*13 120	12 130	*9 820	7 880	*8 240	5 650					*5 630	4 260	8,98
	1,5 m kg				*15 310	11 390	*11 020	7 500	8 490	5 450	*6 380	4 160			*6 010	4 140	9,03
	0 m kg				*16 150	11 050	11 680	7 260	8 330	5 300					6 570	4 220	8,82
	-1,5 m kg				*10 590	*10 590	*15 880	10 970	11 560	7 150	8 260	5 250			7 110	4 550	8,34
	-3 m kg				*17 570	*17 570	*14 660	11 070	*11 080	7 190	*8 310	5 310			*8 240	5 280	7,53
	-4,5 m kg						*16 210	*16 210	*12 110	11 340	*8 840	7 410			*8 190	7 000	6,26
6,2 m boom 3,7 m arm 700 mm shoe 8 250 kg counterweight	9 m kg							*6 250	*6 250						*4 970	*4 970	6,56
	7,5 m kg									*5 700	*5 700				*4 510	*4 510	7,89
	6 m kg							*6 720	*6 720	*6 580	6 160				*4 340	*4 340	8,76
	4,5 m kg				*9 040	*9 040	*7 780	*7 780	*7 090	6 000	*5 700	4 450			*4 320	4 190	9,31
	3 m kg				*11 930	*11 930	*9 190	8 100	*7 820	5 780	6 650	4 360			*4 440	3 920	9,6
	1,5 m kg				*14 530	11 730	*10 570	7 690	*8 590	5 560	6 530	4 240			*4 710	3 820	9,64
	0 m kg				*6 250	*6 250	*15 960	11 240	*11 550	7 390	8 410	5 390	4 150		*5 150	3 870	9,45
	-1,5 m kg		*6 250	*6 250	*10 020	*10 020	*16 210	11 060	11 640	7 230	8 300	5 290	*5 950	4 120	*5 910	4 120	9
	-3 m kg		*10 480	*10 480	*15 100	*15 100	*15 460	11 070	*11 570	7 200	8 300	5 280			*7 240	4 660	8,26
	-4,5 m kg				*18 840	*18 840	*13 560	11 250	*10 150	7 320					*7 910	5 800	7,12
	-6 m kg						*9 540	*9 540							*8 060	*8 060	5,15
6,2 m boom 2,55 m arm 700 mm shoe 8 700 kg counterweight	9 m kg														*8 640	*8 640	4,72
	7,5 m kg							*7 880	*7 880						*7 950	7 830	6,44
	6 m kg				*9 090	*9 090	*8 130	*8 130							*7 800	6 070	7,49
	4,5 m kg				*11 320	*11 320	*9 090	8 420	*8 040	5 960					*7 840	5 230	8,13
	3 m kg				*14 070	12 230	*10 330	8 030	*8 590	5 790					7 370	4 820	8,45
	1,5 m kg				*15 870	11 610	*11 380	7 690	8 700	5 610					7 210	4 680	8,5
	0 m kg				*16 210	11 390	*11 900	7 490	8 570	5 500					7 420	4 800	8,28
	-1,5 m kg				*11 520	*11 520	*15 560	11 400	*11 730	7 440	8 550	5 480			8 140	5 230	7,77
	-3 m kg				*18 380	*18 380	*13 970	11 550	*10 630	7 520					*8 840	6 240	6,89
	-4,5 m kg						*10 780	*10 780							*8 590	*8 590	5,47
6,2 m boom 3,05 m arm 700 mm shoe 8 700 kg counterweight	9 m kg							*6 250	*6 250						*6 440	*6 440	5,62
	7,5 m kg							*7 110	*7 110						*5 720	*5 720	7,13
	6 m kg							*7 500	*7 500	*7 200	6 160				*5 470	5 400	8,08
	4,5 m kg		*14 760	*14 760	*10 320	*10 320	*8 510	*8 510	*7 600	6 020					*5 460	4 740	8,68
	3 m kg				*13 120	12 480	*9 820	8 110	*8 240	5 820					*5 630	4 400	8,98
	1,5 m kg				*15 310	11 740	*11 020	7 740	8 710	5 630	*6 380	4 310			*6 010	4 280	9,03
	0 m kg				*16 150	11 400	*11 750	7 490	8 550	5 480					*6 670	4 370	8,82
	-1,5 m kg				*10 590	*10 590	*15 880	11 320	*11 820	7 390	8 490	5 420			7 300	4 710	8,34
	-3 m kg				*17 570	*17 570	*14 660	11 420	*11 080	7 430	*8 310	5 490			*8 240	5 460	7,53
	-4,5 m kg						*16 210	*16 210	*12 110	11 690	*8 840	7 650			*8 190	7 220	6,26
6,2 m boom 3,7 m arm 700 mm shoe 8 700 kg counterweight	9 m kg							*6 250	*6 250						*4 970	*4 970	6,56
	7,5 m kg									*5 700	*5 700				*4 510	*4 510	7,89
	6 m kg							*6 720	*6 720	*6 580	6 330				*4 340	*4 340	8,76
	4,5 m kg				*9 040	*9 040	*7 780	*7 780	*7 090	6 180	*5 700	4 600			*4 320	*4 320	9,31
	3 m kg				*11 930	*11 930	*9 190	8 330	*7 820	5 960	6 830	4 500			*4 440	4 050	9,6
	1,5 m kg				*14 530	12 080	*10 570	7 920	*8 590	5 740	6 710	4 390			*4 710	3 950	9,64
	0 m kg				*6 250	*6 250	*15 960	11 600	*11 550	7 620	8 640	5 560	4 300		*5 150	4 010	9,45
	-1,5 m kg				*10 480	*10 480	*15 100	*15 100	*15 460	11 420	*11 570	7 440	8 530	5 460	*5 910	4 260	9
	-3 m kg						*18 840	*18 840	*13 560	11 600	*10 150	7 550			*7 240	4 810	8,26
	-4,5 m kg							*9 540	*9 540						*7 910	5 990	7,12
	-6 m kg														*8 060	*8 060	5,15

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

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 fit from the following values.

### • ECR305CL

 Across undercarriage   Along undercarriage	Lifting hook related to ground level	1,5 m		3,0 m		4,5 m		6,0 m		7,5 m		9,0 m		Max. reach							
																Max. m					
6,2 m boom 2,55 m arm 800 mm shoe 8 250 kg counterweight	9 m kg														*8 640	*8 640	4,72				
	7,5 m kg							*7 880	*7 880						*7 950	7 700	6,44				
	6 m kg				*9 090	*9 090	*8 130	*8 130							*7 800	5 960	7,49				
	4,5 m kg				*11 320	*11 320	*9 090	8 280	*8 040	5 860					*7 840	5 130	8,13				
	3 m kg				*14 070	12 020	*10 330	7 890	*8 590	5 680					7 270	4 730	8,45				
	1,5 m kg				*15 870	11 400	*11 380	7 550	8 580	5 510					7 110	4 590	8,5				
	0 m kg				*16 210	11 190	11 820	7 350	8 450	5 390					7 320	4 710	8,28				
	-1,5 m kg				*11 520	*11 520	*15 560	11 190	*11 730	7 300	8 430	5 370			8 020	5 130	7,77				
	-3 m kg				*18 380	*18 380	*13 970	11 340	*10 630	7 380					*8 840	6 130	6,89				
	-4,5 m kg						*10 780	*10 780							*8 590	*8 590	5,47				
6,2 m boom 3,05 m arm 800 mm shoe 8 250 kg counterweight	9 m kg														*6 440	*6 440	5,62				
	7,5 m kg							*7 110	*7 110						*5 720	*5 720	7,13				
	6 m kg							*7 500	*7 500	*7 200	6 050				*5 470	5 310	8,08				
	4,5 m kg				*14 760	*14 760	*10 320	*10 320	*8 510	8 390	*7 600	5 920			*5 460	4 650	8,68				
	3 m kg						*13 120	12 270	*9 820	7 970	*8 240	5 720			*5 630	4 310	8,98				
	1,5 m kg						*15 310	11 530	*11 020	7 600	*8 590	5 520	*6 380	4 220	*6 010	4 200	9,03				
	0 m kg						*16 150	11 190	*11 750	7 350	*8 440	5 380			6 660	4 280	8,82				
	-1,5 m kg				*10 590	*10 590	*15 880	11 110	11 710	7 250	*8 370	5 320			7 200	4 610	8,34				
	-3 m kg				*17 570	*17 570	*14 660	11 210	*11 080	7 290	*8 310	5 390			*8 240	5 360	7,53				
	-4,5 m kg						*16 210	*16 210	*12 110	11 480	*8 840	7 510			*8 190	7 090	6,26				
6,2 m boom 3,7 m arm 800 mm shoe 8 250 kg counterweight	9 m kg							*6 250	*6 250						*4 970	*4 970	6,56				
	7,5 m kg														*4 510	*4 510	7,89				
	6 m kg							*6 720	*6 720	*6 580	6 230				*4 340	*4 340	8,76				
	4,5 m kg						*9 040	*9 040	*7 780	*7 780	*7 090	6 070	*5 700	4 510	*4 320	4 250	9,31				
	3 m kg						*11 930	*11 930	*9 190	8 190	*7 820	5 860	6 740	4 410	*4 440	3 970	9,6				
	1,5 m kg						*14 530	11 880	*10 570	7 780	*8 590	5 640	6 620	4 300	*4 710	3 870	9,64				
	0 m kg						*6 250	*6 250	*15 960	11 390	*11 550	7 480	8 520	5 460	6 520	4 210	*5 150	3 930	9,45		
	-1,5 m kg				*6 250	*6 250	*10 020	*10 020	*16 210	11 200	11 790	7 320	8 410	5 360	*5 950	4 180	9				
	-3 m kg				*10 480	*10 480	*15 100	*15 100	*15 460	11 210	*11 570	7 300	8 410	5 350		7 240	4 720	8,26			
	-4,5 m kg						*18 840	*18 840	*13 560	11 390	*10 150	7 410				*7 910	5 880	7,12			
	-6 m kg							*9 540	*9 540						*8 060	*8 060	5,15				
6,2 m boom 2,55 m arm 800 mm shoe 8 700 kg counterweight	9 m kg														*8 640	*8 640	4,72				
	7,5 m kg							*7 880	*7 880						*7 950	7 920	6,44				
	6 m kg						*9 090	*9 090	*8 130	*8 130					*7 800	6 140	7,49				
	4,5 m kg						*11 320	*11 320	*9 090	8 510	*8 040	6 030			*7 840	5 290	8,13				
	3 m kg						*14 070	12 370	*10 330	8 120	*8 590	5 860			*7 470	4 880	8,45				
	1,5 m kg						*15 870	11 750	*11 380	7 790	8 800	5 690			7 300	4 740	8,5				
	0 m kg						*16 210	11 540	*11 900	7 590	8 680	5 570			7 520	4 860	8,28				
	-1,5 m kg						*11 520	*11 520	*15 560	11 540	*11 730	7 530	8 660	5 550		8 240	5 300	7,77			
	-3 m kg						*18 380	*18 380	*13 970	11 690	*10 630	7 620				*8 840	6 320	6,89			
	-4,5 m kg							*10 780	*10 780							*8 590	*8 590	5,47			
6,2 m boom 3,05 m arm 800 mm shoe 8 700 kg counterweight	9 m kg							*6 250	*6 250						*6 440	*6 440	5,62				
	7,5 m kg														*5 720	*5 720	7,13				
	6 m kg							*7 500	*7 500	*7 200	6 230				*5 470	5 470	8,08				
	4,5 m kg				*14 760	*14 760	*10 320	*10 320	*8 510	*8 510	*7 600	6 090			*5 460	4 800	8,68				
	3 m kg						*13 120	12 620	*9 820	8 210	*8 240	5 890			*5 630	4 450	8,98				
	1,5 m kg						*15 310	11 880	*11 020	7 840	8 820	5 700	*6 380	4 360	*6 010	4 340	9,03				
	0 m kg						*16 150	11 540	*11 750	7 590	8 660	5 550			*6 670	4 430	8,82				
	-1,5 m kg						*10 590	*10 590	*15 880	11 470	*11 820	7 490	8 600	5 490		7 400	4 770	8,34			
	-3 m kg						*17 570	*17 570	*14 660	11 560	*11 080	7 520	*8 310	5 560		*8 240	5 530	7,53			
	-4,5 m kg							*16 210	*16 210	*12 110	11 840	*8 840	7 740			*8 190	7 310	6,26			
6,2 m boom 3,7 m arm 800 mm shoe 8 700 kg counterweight	9 m kg							*6 250	*6 250						*4 970	*4 970	6,56				
	7,5 m kg														*4 510	*4 510	7,89				
	6 m kg							*6 720	*6 720	*6 580	6 400				*4 340	*4 340	8,76				
	4,5 m kg							*9 040	*9 040	*7 780	*7 780	*7 090	6 250	*5 700	4 650	*4 320	4 320	9,31			
	3 m kg							*11 930	*11 930	*9 190	8 430	*7 820	6 030	6 920	4 560	*4 440	4 100	9,6			
	1,5 m kg							*14 530	12 230	*10 570	8 020	*8 590	5 810	6 800	4 440	*4 710	4 000	9,64			
	0 m kg							*6 250	*6 250	*15 960	11 740	*11 550	7 720	8 750	5 640	6 700	4 350	*5 150	4 060	9,45	
	-1,5 m kg							*6 250	*6 250	*10 020	*10 020	*16 210	11 550	*11 930	7 560	8 640	5 540	*5 950	4 320	9	
	-3 m kg							*10 480	*10 480	*15 100	*15 100	*15 460	11 560	*11 570	7 530	8 630	5 530		7 240	4 880	8,26
	-4,5 m kg								*18 840	*18 840	*13 560	11 740	*10 150	7 650				*7 910	6 070	7,12	
	-6 m kg															*8 060	*8 060	5,15			

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.

## STANDARD EQUIPMENT

### Engine

Turbocharged, 4-stroke diesel engine with water cooling, direct injection and charged air cooler that meets EU Stage IIIA requirements  
Air filter with indicator  
Air intake heater  
Electric engine shut-off  
Fuel filter and water separator  
Fuel filler pump: 50 l/min, with automatic shut-off  
Alternator, 80 A

### Electric/Electronic control system

Contronics:

- Advanced mode control system
- Self-diagnostic system

Machine status indication

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

High-capacity halogen lights:

- Frame-mounted 1
- Boom-mounted 2

Batteries, 2 x 12 V / 150 Ah

Start motor, 24 V / 5,5 kW

### Hydraulic system

Hose rupture valve: boom

Overload warning device

Automatic sensing hydraulic system:

- Summation system
- Boom priority
- Arm priority
- Swing priority

Boom and arm regeneration valves

Swing anti-rebound valves

Boom and arm holding valves

Multi-stage filtering system

Boom cylinders

Cylinder cushioning

Cylinder contamination seals

Auxiliary hydraulic valve

Automatic two-speed travel motors

Long life hydraulic oil, ISO VG 46

### Superstructure

Access way with handrail

Full height counterweight 8 250 kg

Tool storage area

Service walkway with anti-slip grating

Undercover (4,5 mm)

### Cab and interior

Fabric seat with heater

Control joysticks with 4 switches each

Travel pedals with hand levers

Heater & air-conditioner, automatic

Hydraulic dampening cab mounts

Adjustable operator seat and joystick control console

AM/FM stereo with CD player and MP3 input; includes antenna in glass

Hydraulic safety lock lever

Rear view camera

Cab, all-weather sound suppressed, includes:

- Cup holders
- Door locks
- Floor mat
- Horn
- Large storage area
- Pull-up type front window
- Removable lower windshield
- Seat belt, retractable type
- Safety glass, light tinted
- Rain shield
- Sun screen, front, roof, rear
- Windshield wiper with washer and intermittent feature

Anti-vandalism kit assembly preparation

Master key

### Undercarriage

Hydraulic track adjusters

Greased and sealed track link

Track guard

Undercover (heavy duty 10 mm)

### Track shoes

Track shoes, triple grouser

### Digging equipment

Boom: 6,2 m

Arm: 3,05 m

### Service

Tool kit, daily maintenance

CareTrack

## OPTIONAL EQUIPMENT

### Engine

Block heater: 240 V

Diesel coolant heater, 10 kW, programmable

Water separator with heater

Reversible cooling fan

### Electric

Extra lights:

- Cab-mounted 2
- Upper structure-mounted 1

Extra lights (cab front only)

- Cab-mounted 1

Anti-theft system

Rotating warning beacon

Travel alarm

### Hydraulic system

Hose rupture valve: arm

Hydraulic piping:

- Work tool management system (up to 20 programmable memories)
- Hammer & shear, 1 and 2 pump flow
- Hammer & shear: variable flow and pressure pre-setting

- Additional return filter

- Slope & rotator

- Grapple

- Oil leak (drain) line

- Quick fit piping

Volvo hydraulic quick fit (S2, U29)

Long life hydraulic oil, ISO VG 32

Long life hydraulic oil, ISO VG 68

Hydraulic oil, biodegradable 32

Hydraulic oil, biodegradable 46

Boom float function

Pilot control pattern change

### Superstructure

Full height counterweight 8 250/8 700 kg

### Cab and interior

Fabric seat

Fabric seat with heater and air suspension

Control joystick with proportional control

Cab-mounted falling object guard (FOG)

Cab-mounted falling object

protective structure (FOPS)

Protective screen for front window

Anti-vandalism kit

Specific key

Smoker kit (ashtray and lighter)

Straight travel pedal

Opening top hatch

### Undercarriage

Full track guard

Dozer blade

### Track shoes

Track shoes 600/700/800/850 mm, triple grouser

Double grouser 600 mm shoe

### Digging equipment

Arm: 2,55 m, 3,7 m

Linkage with lifting eye

Extended greasing bushing

### Service

Tool kit

# VOLVO CONSTRUCTION EQUIPMENT



Volvo Construction Equipment is different. Our machines are designed, built and supported in a different way. That difference comes from an engineering heritage of over 175 years. A heritage of thinking first about the people who actually use the machines. About how to help them be safer, more comfortable, more productive. About the environment we all share. The result of that thinking is a growing range of machines and a global support network dedicated to helping you do more. People around the world are proud to use Volvo.

And we're proud of what makes Volvo different – More care. Built in.

Not all products are available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice.  
The illustrations do not necessarily show the standard version of the machine.

# VOLVO

**Volvo Construction Equipment**  
[www.volvoce.com](http://www.volvoce.com)

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