Volvo Excavator

ECR305CL

74,220 - 81,320 lb  192 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.
- Counterweight swing radius extends over the track width by less than 10%.

**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.
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.
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.
Get comfortable with doing more. Less fatigue goes along 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.

**RELAX. IT’S VOLVO.**
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.

**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.

**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 (UOF29, 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.

**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 bushings

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 EPA Tier 3 compliant engine uses precise, high-pressure fuel injectors, turbo charger and air to air intercooler and electronic engine controls to optimize machine performance.

<table>
<thead>
<tr>
<th>Engine</th>
<th>Volvo D7D EAE3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. power, at</td>
<td>30 r/min 1,800 rpm</td>
</tr>
<tr>
<td>Net (ISO 9249, SAE J1349)</td>
<td>143 kW 192 hp</td>
</tr>
<tr>
<td>Gross (SAE J1995)</td>
<td>153 kW 205 hp</td>
</tr>
<tr>
<td>Max. torque at 1,350 rpm</td>
<td>985 Nm 723 lb/ft</td>
</tr>
<tr>
<td>No. of cylinders</td>
<td>6</td>
</tr>
<tr>
<td>Displacement</td>
<td>7.1 l 433 cu.in</td>
</tr>
<tr>
<td>Bore</td>
<td>108 mm 4.25&quot;</td>
</tr>
<tr>
<td>Stroke</td>
<td>130 mm 5.12&quot;</td>
</tr>
</tbody>
</table>

**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.

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

**Service refill capacities**

| Fuel tank       | 390 l 103 gal          |
| Hydraulic system, total | 370 l 98 gal       |
| Hydraulic tank  | 150 l 40 gal           |
| Engine oil      | 30 l 8 gal             |
| Engine coolant  | 35 l 9 gal             |
| Swing reduction unit | 6 l 1.6 gal       |
| Travel reduction unit | 2 x 6.8 l 2 x 1.8 gal |

**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.

| Max. swing speed | 1,000 rpm |
| Max. swing torque| 117.6 kN·m 86,740 lbf·ft |

**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.

| Max. drawbar pull | 260 kN 58,430 lb |
| Max. travel speed | 30/45 km/h 1.9/2.8 mph |
| Gradeability      | 35% 70%          |

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

| Track pads | 2 x 48 |
| Link pitch | 215.9 mm 8.5" |
| Shoe width, triple grouser | 600/700/800/850 mm 24°/28°/31°/32° |
| Shoe width, double grouser | 600 mm 24" |
| Bottom rollers | 2 x 8 |
| Top rollers | 2 x 2 |

**Hydraulic system**
The hydraulic system, also known as the “Integrated work mode control” is engineered for high-productivity, high-digging capacity, high-manoeuvering precision and excellent fuel economy. The summation system, boom, arm and swing priority along with boom, arm and bucket 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**
Type: 2 x variable displacement axial piston pumps
Maximum flow: 2 x 263 l/min 2 x 69 gpm

**Pilot pump**
Type: Gear pump
Maximum flow: 1 x 18 l/min 1 x 4.8 gpm

**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**: 4,690/4,980 psi
- **Swing circuit**: 27.9 MPa 4,050 psi
- **Pilot circuit**: 3.9 MPa 570 psi

**Hydraulic cylinders**

- **Boom**
  - Mono boom - 2 x 12 V
  - Bore x Stroke - e140 x 1,151 mm
  - Relief valve setting - e5.9 x 89°
- **Arm**
  - Bore x Stroke - e150 x 1,745 mm
  - Relief valve setting - e5.9 x 68.7°
- **Bucket**
  - Bore x Stroke - e140 x 1,140 mm
  - Relief valve setting - e5.5 x 44.9°
- **Dozer Blade**
  - Bore x Stroke - e165 x 385 mm
  - Relief valve setting - e6.5 x 15.2°

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

Excellent all around-visibility provided through maximum cab glass, transparent roof hatch and 2-piece sliding door window. The tilt-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 with timer.

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 (option).

**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)
### Ground pressure

**ECR305CL with 6.2 m 20' 4" boom, 3.05 m, 10' 0" arm, 1.166 kg, 2,570 lb bucket, 8,250 kg, 18,190 lb counterweight**

<table>
<thead>
<tr>
<th>Description</th>
<th>Shoe width</th>
<th>Operating weight</th>
<th>Ground pressure</th>
<th>Overall width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triple grouser</td>
<td>600 mm, 24&quot;</td>
<td>33,665 kg, 74,230 lb</td>
<td>63.7 kPa, 9.2 psi</td>
<td>3,340 mm, 10' 11&quot;</td>
</tr>
<tr>
<td></td>
<td>700 mm, 28&quot;</td>
<td>34,310 kg, 75,650 lb</td>
<td>54.9 kPa, 8.0 psi</td>
<td>3,440 mm, 11' 3&quot;</td>
</tr>
<tr>
<td></td>
<td>800 mm, 31&quot;</td>
<td>34,705 kg, 76,520 lb</td>
<td>49.0 kPa, 7.1 psi</td>
<td>3,540 mm, 11' 7&quot;</td>
</tr>
<tr>
<td></td>
<td>850 mm, 36&quot;</td>
<td>34,895 kg, 76,930 lb</td>
<td>46.1 kPa, 6.7 psi</td>
<td>3,590 mm, 11' 9&quot;</td>
</tr>
<tr>
<td>Double grouser</td>
<td>600 mm, 24&quot;</td>
<td>34,375 kg, 75,800 lb</td>
<td>64.7 kPa, 9.4 psi</td>
<td>3,340 mm, 10' 11&quot;</td>
</tr>
</tbody>
</table>

**ECR305CL with dozer blade, 6.2 m 20' 4" boom, 3.05 m, 10' 0" arm, 1.166 kg, 2,570 lb bucket, 8,250 kg, 18,190 lb counterweight**

<table>
<thead>
<tr>
<th>Description</th>
<th>Shoe width</th>
<th>Operating weight</th>
<th>Ground pressure</th>
<th>Overall width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triple grouser</td>
<td>600 mm, 24&quot;</td>
<td>36,175 kg, 79,770 lb</td>
<td>67.7 kPa, 9.8 psi</td>
<td>3,340 mm, 10' 11&quot;</td>
</tr>
<tr>
<td>Double grouser</td>
<td>600 mm, 24&quot;</td>
<td>36,885 kg, 81,330 lb</td>
<td>69.6 kPa, 10.1 psi</td>
<td>3,340 mm, 10' 11&quot;</td>
</tr>
</tbody>
</table>

**ECR305CL with 6.2 m 20' 4" boom, 3.05 m, 10' 0" arm, 1.166 kg, 2,570 lb bucket, 8,700 kg, 19,180 lb counterweight**

<table>
<thead>
<tr>
<th>Description</th>
<th>Shoe width</th>
<th>Operating weight</th>
<th>Ground pressure</th>
<th>Overall width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triple grouser</td>
<td>600 mm, 24&quot;</td>
<td>34,115 kg, 75,220 lb</td>
<td>63.7 kPa, 9.2 psi</td>
<td>3,340 mm, 10' 11&quot;</td>
</tr>
<tr>
<td></td>
<td>700 mm, 28&quot;</td>
<td>34,760 kg, 76,650 lb</td>
<td>55.9 kPa, 8.1 psi</td>
<td>3,440 mm, 11' 3&quot;</td>
</tr>
<tr>
<td></td>
<td>800 mm, 31&quot;</td>
<td>35,155 kg, 77,520 lb</td>
<td>50.0 kPa, 7.3 psi</td>
<td>3,540 mm, 11' 7&quot;</td>
</tr>
<tr>
<td></td>
<td>850 mm, 36&quot;</td>
<td>35,345 kg, 77,940 lb</td>
<td>47.1 kPa, 6.8 psi</td>
<td>3,590 mm, 11' 9&quot;</td>
</tr>
<tr>
<td>Double grouser</td>
<td>600 mm, 24&quot;</td>
<td>34,825 kg, 76,790 lb</td>
<td>65.7 kPa, 9.5 psi</td>
<td>3,340 mm, 10' 11&quot;</td>
</tr>
</tbody>
</table>

**ECR305CL with dozer blade, 6.2 m 20' 4" boom, 3.05 m, 10' 0" arm, 1.166 kg, 2,570 lb bucket, 8,700 kg, 19,180 lb counterweight**

<table>
<thead>
<tr>
<th>Description</th>
<th>Shoe width</th>
<th>Operating weight</th>
<th>Ground pressure</th>
<th>Overall width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triple grouser</td>
<td>600 mm, 24&quot;</td>
<td>36,625 kg, 80,760 lb</td>
<td>68.6 kPa, 10.0 psi</td>
<td>3,340 mm, 10' 11&quot;</td>
</tr>
<tr>
<td>Double grouser</td>
<td>600 mm, 24&quot;</td>
<td>37,335 kg, 82,320 lb</td>
<td>70.6 kPa, 10.2 psi</td>
<td>3,340 mm, 10' 11&quot;</td>
</tr>
</tbody>
</table>
**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, 19,180 lb counterweight**

<table>
<thead>
<tr>
<th>Description</th>
<th>Max. bucket volume / weight</th>
<th>6.2 m, 20' 4&quot; boom</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2.55 m, 8' 4&quot; arm</td>
</tr>
<tr>
<td>GP bucket 1.5 t/m³, 2,530 lb/yd²</td>
<td>l / kg</td>
<td>1,950 / 1,650</td>
</tr>
<tr>
<td></td>
<td>yd³ /lb</td>
<td>2.55 / 3,640</td>
</tr>
<tr>
<td>GP bucket 1.8 t/m³, 3,030 lb/yd²</td>
<td>l / kg</td>
<td>1,725 / 1,475</td>
</tr>
<tr>
<td></td>
<td>yd³ /lb</td>
<td>2.26 / 3,250</td>
</tr>
</tbody>
</table>

- **ECR305CL with quick fit bucket, 8,250 kg, 18,960 lb counterweight**

<table>
<thead>
<tr>
<th>Description</th>
<th>Max. bucket volume / weight</th>
<th>6.2 m, 20' 4&quot; boom</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2.55 m, 8' 4&quot; arm</td>
</tr>
<tr>
<td>GP bucket 1.5 t/m³, 2,530 lb/yd²</td>
<td>l / kg</td>
<td>1,825 / 1,550</td>
</tr>
<tr>
<td></td>
<td>yd³ /lb</td>
<td>2.39 / 3,420</td>
</tr>
<tr>
<td>GP bucket 1.8 t/m³, 3,030 lb/yd²</td>
<td>l / kg</td>
<td>1,625 / 1,375</td>
</tr>
<tr>
<td></td>
<td>yd³ /lb</td>
<td>2.13 / 3,030</td>
</tr>
</tbody>
</table>
### Dimensions

**• ECR305CL**

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit</th>
<th>6.2 m, 20' 4&quot; boom</th>
<th>3.05 m, 10' 0&quot; arm</th>
<th>2.55 m, 8' 4&quot; arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Overall width of upper structure</td>
<td>mm, ft-in</td>
<td>2,990, 9'10&quot;</td>
<td>2,990, 9'10&quot;</td>
<td>2,990, 9'10&quot;</td>
</tr>
<tr>
<td>B. Overall width</td>
<td>mm, ft-in</td>
<td>3,590, 11'9&quot;</td>
<td>3,590, 11'9&quot;</td>
<td>3,590, 11'9&quot;</td>
</tr>
<tr>
<td>C. Overall height of cab</td>
<td>mm, ft-in</td>
<td>3,180, 10'5&quot;</td>
<td>3,180, 10'5&quot;</td>
<td>3,180, 10'5&quot;</td>
</tr>
<tr>
<td>D. Tail swing radius</td>
<td>mm, ft-in</td>
<td>1,685, 6'1&quot;</td>
<td>1,865, 6'1&quot;</td>
<td>1,865, 6'1&quot;</td>
</tr>
<tr>
<td>E. Overall height</td>
<td>mm, ft-in</td>
<td>3,425, 11'3&quot;</td>
<td>3,425, 11'3&quot;</td>
<td>3,425, 11'3&quot;</td>
</tr>
<tr>
<td>F. Counterweight clearance *</td>
<td>mm, ft-in</td>
<td>1,145, 3'9&quot;</td>
<td>1,145, 3'9&quot;</td>
<td>1,145, 3'9&quot;</td>
</tr>
<tr>
<td>G. Tumbler length</td>
<td>mm, ft-in</td>
<td>4,020, 13'2&quot;</td>
<td>4,020, 13'2&quot;</td>
<td>4,020, 13'2&quot;</td>
</tr>
<tr>
<td>H. Track length</td>
<td>mm, ft-in</td>
<td>4,946, 16'3&quot;</td>
<td>4,946, 16'3&quot;</td>
<td>4,946, 16'3&quot;</td>
</tr>
<tr>
<td>J. Shoe width</td>
<td>mm, ft-in</td>
<td>850, 2'8&quot;</td>
<td>850, 2'8&quot;</td>
<td>850, 2'8&quot;</td>
</tr>
<tr>
<td>K. Min. ground clearance *</td>
<td>mm, ft-in</td>
<td>500, 1'8&quot;</td>
<td>500, 1'8&quot;</td>
<td>500, 1'8&quot;</td>
</tr>
<tr>
<td>L. Overall length</td>
<td>mm, ft-in</td>
<td>9,950, 32'8&quot;</td>
<td>9,865, 32'4&quot;</td>
<td>9,890, 32'5&quot;</td>
</tr>
<tr>
<td>M. Overall height of boom</td>
<td>mm, ft-in</td>
<td>3,445, 11'4&quot;</td>
<td>3,305, 10'10&quot;</td>
<td>3,550, 11'8&quot;</td>
</tr>
</tbody>
</table>

* Without shoe grouser

**• Boom**

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit</th>
<th>6.2 m, 20' 4&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>mm, ft-in</td>
<td>6,430, 21'1&quot;</td>
</tr>
<tr>
<td>Height</td>
<td>mm, ft-in</td>
<td>1,680, 5'6&quot;</td>
</tr>
<tr>
<td>Width</td>
<td>mm, ft-in</td>
<td>770, 2'6&quot;</td>
</tr>
<tr>
<td>Weight</td>
<td>kg, lb</td>
<td>2,480, 5,470</td>
</tr>
</tbody>
</table>

**• Arm**

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit</th>
<th>2.55 m, 8' 4&quot;</th>
<th>3.05 m, 10' 0&quot;</th>
<th>3.7 m, 12' 2&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>mm, ft-in</td>
<td>3,710, 12'2&quot;</td>
<td>4,150, 13'7&quot;</td>
<td>4,900, 16'1&quot;</td>
</tr>
<tr>
<td>Height</td>
<td>mm, ft-in</td>
<td>1,010, 3'4&quot;</td>
<td>1,010, 3'4&quot;</td>
<td>1,050, 3'5&quot;</td>
</tr>
<tr>
<td>Width</td>
<td>mm, ft-in</td>
<td>545, 1'9&quot;</td>
<td>545, 1'9&quot;</td>
<td>545, 1'9&quot;</td>
</tr>
<tr>
<td>Weight</td>
<td>kg, lb</td>
<td>1,475, 3,250</td>
<td>1,540, 3,400</td>
<td>1,680, 3,700</td>
</tr>
</tbody>
</table>

**• Front dozer blade**

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Height</td>
<td>mm, ft-in</td>
<td>728, 2' 5&quot;</td>
</tr>
<tr>
<td>Width</td>
<td>mm, ft-in</td>
<td>3,340, 10' 11&quot;</td>
</tr>
<tr>
<td>Weight</td>
<td>kg, lb</td>
<td>1,496, 4' 11&quot;</td>
</tr>
<tr>
<td>B. Lift height</td>
<td>mm, ft-in</td>
<td>820, 2' 6&quot;</td>
</tr>
<tr>
<td>C. Digging depth</td>
<td>mm, ft-in</td>
<td>495, 1' 7&quot;</td>
</tr>
</tbody>
</table>

* Only available with 600mm width shoe
Bucket radius

- **ECR305CL**

<table>
<thead>
<tr>
<th>Machine with pin-on bucket</th>
<th>Unit</th>
<th>6.2 m, 20' 4&quot; boom</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2.55 m, 8' 4&quot; arm</td>
</tr>
<tr>
<td>A. Max. digging reach</td>
<td>mm, ft-in</td>
<td>10,110, 33' 2&quot;</td>
</tr>
<tr>
<td>B. Max. digging reach on ground</td>
<td>mm, ft-in</td>
<td>9,905, 32' 6&quot;</td>
</tr>
<tr>
<td>C. Max. digging depth</td>
<td>mm, ft-in</td>
<td>6,460, 21' 2&quot;</td>
</tr>
<tr>
<td>D. Max. digging depth (B' level)</td>
<td>mm, ft-in</td>
<td>6,260, 20' 6&quot;</td>
</tr>
<tr>
<td>E. Max. vertical wall digging depth</td>
<td>mm, ft-in</td>
<td>5,600, 18' 4&quot;</td>
</tr>
<tr>
<td>F. Max. cutting height</td>
<td>mm, ft-in</td>
<td>10,455, 34' 4&quot;</td>
</tr>
<tr>
<td>G. Max. dumping height</td>
<td>mm, ft-in</td>
<td>7,435, 24' 5&quot;</td>
</tr>
<tr>
<td>H. Min. front swing radius</td>
<td>mm, ft-in</td>
<td>3,285, 10' 9&quot;</td>
</tr>
</tbody>
</table>

| Bucket radius                               | mm, ft-in | 1,600, 5' 2" | 1,600, 5' 2" | 1,600, 5' 2" |

<table>
<thead>
<tr>
<th>Breakout force - bucket (Normal/Power boost)</th>
<th>Unit</th>
<th>2.55 m, 8' 4&quot; arm</th>
<th>3.05 m, 10' 0&quot; arm</th>
<th>3.7 m, 12' 2&quot; arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAE J1179</td>
<td>kN</td>
<td>163 / 173</td>
<td>163 / 173</td>
<td>163 / 173</td>
</tr>
<tr>
<td>IS0 6015</td>
<td>kN</td>
<td>187 / 198</td>
<td>187 / 198</td>
<td>187 / 198</td>
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<tr>
<td></td>
<td>lb</td>
<td>36,580 / 38,810</td>
<td>36,580 / 38,810</td>
<td>36,580 / 38,810</td>
</tr>
<tr>
<td></td>
<td>lb</td>
<td>42,050 / 44,610</td>
<td>42,050 / 44,610</td>
<td>42,050 / 44,610</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Tearout force - arm (Normal/Power boost)</th>
<th>Unit</th>
<th>2.55 m, 8' 4&quot; arm</th>
<th>3.05 m, 10' 0&quot; arm</th>
<th>3.7 m, 12' 2&quot; arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAE J1179</td>
<td>kN</td>
<td>150 / 159</td>
<td>127 / 135</td>
<td>112 / 119</td>
</tr>
<tr>
<td>IS0 6015</td>
<td>kN</td>
<td>158 / 167</td>
<td>132 / 140</td>
<td>115 / 122</td>
</tr>
<tr>
<td></td>
<td>lb</td>
<td>33,630 / 35,680</td>
<td>33,630 / 35,680</td>
<td>33,630 / 35,680</td>
</tr>
<tr>
<td></td>
<td>lb</td>
<td>35,430 / 37,600</td>
<td>29,570 / 31,380</td>
<td>25,820 / 27,390</td>
</tr>
</tbody>
</table>

| Rotation angle, bucket                       | deg. | 179               | 179               | 179               |
### ECR305CL

<table>
<thead>
<tr>
<th>Across under-</th>
<th>Lifting hook-related to ground level</th>
<th>1.5 m, 5°</th>
<th>3.0 m, 10°</th>
<th>4.5 m, 15°</th>
<th>6.0 m, 20°</th>
<th>7.5 m, 25°</th>
<th>9.0 m, 30°</th>
<th>Max. reach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arm 6.2 m +</td>
<td>30°</td>
<td>71</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
</tr>
<tr>
<td>7.5 m 20°</td>
<td>714</td>
<td>164</td>
<td>164</td>
<td>164</td>
<td>164</td>
<td>164</td>
<td>164</td>
<td>164</td>
</tr>
<tr>
<td>6 m 20°</td>
<td>163</td>
<td>163</td>
<td>326</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
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<tr>
<td>4.5 m 15°</td>
<td>164</td>
<td>164</td>
<td>164</td>
<td>164</td>
<td>164</td>
<td>164</td>
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<tr>
<td>3 m 10°</td>
<td>163</td>
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<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
</tr>
<tr>
<td>1.5 m 5°</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
</tr>
<tr>
<td>0 m 0°</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
</tr>
<tr>
<td>-3° -10°</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
</tr>
<tr>
<td>-4° -15°</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
</tr>
<tr>
<td>Boom 6.2 m + 20° 4°</td>
<td>30°</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
</tr>
<tr>
<td>Arm 3.7 m +</td>
<td>12°</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
</tr>
<tr>
<td>3.6 mm 35°</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
</tr>
<tr>
<td>Counterweight</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
</tr>
<tr>
<td>18,190 lb  + 18,190 lb</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>163</td>
</tr>
</tbody>
</table>

### Notes:
1. Machine in "Fine Mode-F" (Power Boost) for lifting capacities.
2. The above loads are in compliance with SAE J1097 and ISO 10667 Hydraulic Excavator Lifting Capacity Standards.
3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping loads.
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

<table>
<thead>
<tr>
<th>Across under-carryage</th>
<th>Lifting hook-related to ground level</th>
<th>1.5 m, 5°</th>
<th>3.0 m, 10°</th>
<th>4.5 m, 15°</th>
<th>6.0 m, 20°</th>
<th>7.5 m, 25°</th>
<th>9.0 m, 30°</th>
<th>Max. reach</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 m</td>
<td>30°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
<td>90°</td>
</tr>
<tr>
<td>7.5 m</td>
<td>25°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
<td>90°</td>
</tr>
<tr>
<td>6 m</td>
<td>20°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
<td>90°</td>
</tr>
<tr>
<td>4.5 m</td>
<td>15°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
<td>90°</td>
</tr>
<tr>
<td>3 m</td>
<td>10°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
<td>90°</td>
</tr>
<tr>
<td>1.5 m</td>
<td>5°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
<td>90°</td>
</tr>
<tr>
<td>0 m</td>
<td>0°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
<td>90°</td>
</tr>
<tr>
<td>-0.5 m</td>
<td>5°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
<td>90°</td>
</tr>
<tr>
<td>-1.0 m</td>
<td>-5°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
<td>90°</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Max. m / ft</th>
<th>15°</th>
<th>25°</th>
<th>30°</th>
<th>45°</th>
<th>60°</th>
<th>75°</th>
<th>90°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Across under-carryage</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
<td>90°</td>
</tr>
<tr>
<td>9 m</td>
<td>30°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
</tr>
<tr>
<td>7.5 m</td>
<td>25°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
</tr>
<tr>
<td>6 m</td>
<td>20°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
</tr>
<tr>
<td>4.5 m</td>
<td>15°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
</tr>
<tr>
<td>3 m</td>
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<td>15°</td>
<td>25°</td>
<td>30°</td>
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<td>75°</td>
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<tr>
<td>1.5 m</td>
<td>5°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
</tr>
<tr>
<td>0 m</td>
<td>0°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
</tr>
<tr>
<td>-0.5 m</td>
<td>5°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
</tr>
<tr>
<td>-1.0 m</td>
<td>-5°</td>
<td>15°</td>
<td>25°</td>
<td>30°</td>
<td>45°</td>
<td>60°</td>
<td>75°</td>
</tr>
</tbody>
</table>

Notes:
1. Machine in "Fine Mode-P" (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.

20
STANDARD EQUIPMENT

Engine
Turbocharged, 4-stroke diesel engine with water cooling, direct injection and charged air cooler that meets EPA Tier 3 requirements
Air filter with indicator
Air intake heater
Electric engine shut-off
Fuel filter and water separator
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
Travel alarm
Batteries, 2 x 12 V / 150 Ah
Start motor, 24 V / 5.5 kW

Hydraulic system
Automatic sensing hydraulic system:
– Summation system
– Boom priority
– Arm priority
– Swing priority
Cab adjustment of auxiliary hydraulic pressure and flow

Hydraulic piping:
– Hammer & shear (X1): 2 pump flow
– Quick quick fit piping
– Oil leak (drain) line, Base
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
Standard hydraulic oil, ISO VG 46

Superstructure
Access way with handrail
Full height countertop 8,250 kg, 18,190 lb
Tool storage area
Service walkway with anti-slip grating
Undercover (4.5 mm, 0.18")

Cab and interior
Fabric seat with heater
2 button control for hammer/shear auxiliary hydraulics
Control joysticks with 4 switches each
Travel pedals with hand levers
Pilot control pattern change
Heater & air-conditioner, automatic
Hydraulic damping boom 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

Cab, all-weather sound suppression, includes:
– Cup holders
– Door locks
– Floor mat
– Horn
– Large storage area
– Pull-up type front window
– Removable lower windshield
– Seat belt, 3-inch retractable
– Safety glass, light tinted
– Sun screen, front, roof, rear
– Windshield wiper with washer and intermittent feature
Anti-vandalism kit assembly preparation
Master key
Opening top hatch
Straight travel pedal
Rear view mirror

Undercarriage
Hydraulic track adjusters
Greased and sealed track link
Track guard
Undercover (4.5 mm, 0.18")

Track shoes
Track shoes 850 mm, 33.5", with triple grousers

Digging equipment
Boom: 6.2 m, 24' 4"
Arm: 305 m, 10' heavy duty without wear strips
Centralized lubrication

Service
Tool kit, daily maintenance
Caretrack

OPTIONAL EQUIPMENT

Engine
Block heater: 120V
Diesel coolant heater, programmable
Water separator with heater
Reversible cooling fan
Full filler pump: 50 l/min, 13.2 gpm with automatic shut-off.

Electric
Extra lights:
– Cab-mounted 2
– Upper structure-mounted 1
Extra lights (cab front only):
– Cab-mounted 1
Anti-theft system
Rotating warning beacon

Hydraulic system
Hose rupture valve: boom, arm
Overload warning device
Hydraulic piping:
– Slope & rotator (X3)
– Oil leak (drain) line, Boom
Volvo hydraulic quick fit (S2, UQF 29)
Standard hydraulic oil, ISO VG 32

Hydraulic oil, ISO VG 68
Hydraulic oil, biodegradable 32
Long life hydraulic oil, ISO VG 32
Long life hydraulic oil, ISO VG 46
Long life hydraulic oil, ISO VG 68
Boom float function

Superstructure
Full height countertop, 8,700 kg, 19,180 lb

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
Rain shield, front
Anti-vandalism kit
Rear view camera
Smoker kit (ashtray and lighter)

Undercarriage
Full track guard

Dozer blade, 3,340 mm, 11' width for 600mm, 24" shoe
Undercover (heavy-duty 10 mm, 0.39")

Track shoes
Track shoes 600/700/800/900 mm, 24"/28"/32"/36" with triple grousers
Double grouser 600 mm, 24"

Digging equipment
Arm: 3.05 m, 10' 5" GP without wear strips
3.05 m, 10' 5" GP with wear strips
3.05 m, 10' 5" HD with wear strips
3.7 m, 10' 5" GP without wear strips
3.7 m, 10' 5" GP with wear strips
Extended greasing bushing
Linkage with lifting eye

Buckets
XP UQF 30* 1.02 Cu Yd
XP UQF 48* 1.89 Cu Yd
S2 SOF 30* 1.02 Cu Yd
S2 SOF 48* 1.89 Cu Yd

Service
Tool kit

Standard and optional equipment may vary by market. Please consult your local Volvo dealer for details.
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 180 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.

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.