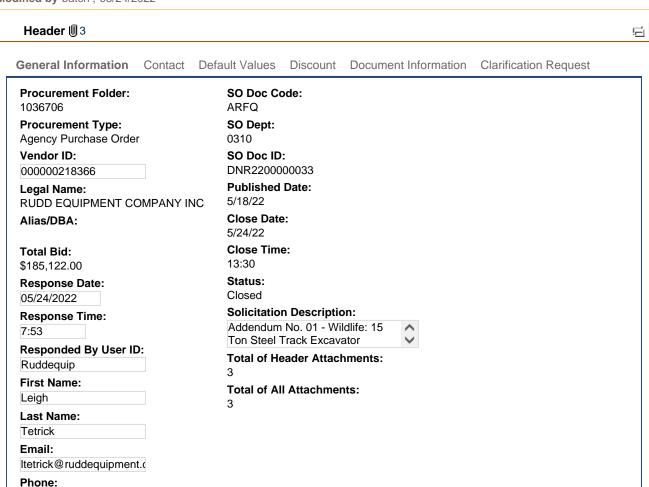
Solicitation Response(SR) Dept: 0310 ID: ESR05102200000007014 Ver.: 1 Function: New Phase: Final

Modified by batch, 05/24/2022

304-755-7788





#### State of West Virginia Agency Request for Quote Equipment

Proc Folder:	1036706		Reason for Modification:
		ife: 15 Ton Steel Track Excavator	Addendum
Proc Type:	Agency Purchase Order		Addendum No. 01 is issued to publish and distribute the attached information to the Vendor Community.
Date Issued	Solicitation Closes	Solicitation No	Version
2022-05-18	2022-05-24 13:30	ARFQ 0310 DNR2200000033	2
		•	
BID RECEIVING L	OCATION :		
BID RESPONSE			
DIVISION OF NAT	URAL RESOURCES		
PROPERTY & PRO	OCUREMENT OFFICE		
324 4TH AVE			
SOUTH CHARLES	TON WV 25303-1	228	

27772	4433	22.24	-037	200	3725	×
100	1250	211	45.0	600	20	2
100	21500	R B	12.33	28.	0.5	
73.5	2000	87.22	200	3770	225	

US

Vendor Customer Code:

Vendor Name:

Address:

Street:

City:

State:

Country:

Zip:

**Principal Contact:** 

**Vendor Contact Phone:** 

Extension:

FOR INFORMATION CONTACT THE BUYER

James H Adkins (304) 558-3397

jamie.h.adkins@wv.gov

Vendor Signature X

FEIN# 61-0445955

DATE 5/24/22

All offers subject to all terms and conditions contained in this solicitation

Date Printed:

May 17, 2022

Page 1

FORM ID: WV-PRC-ARFQ-002 2020/05

#### ADDITIONAL INFORMATION

The West Virginia Division of Natural Resources is soliciting bids on behalf of the Wildlife Resources Section for the one-time purchase of a 15-ton steel track excavator.

INVOICE TO		SHIP TO	
DIVISION OF NATURAL RESOURCES		SUMMERSVILLE WMA	
DISTRICT III OFFICE		3421 Summersville Lake Rd	
163 WILDLIFE RD			
FRENCH CREEK	WV	Summersville WV	
LIS		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Excavator -15 Ton Steel Track	1.00000	EA 4	185,122	bl (85,172

Comm Code	Manufacturer	Specification	Model #	
22100000	VONO	Hyd. Excavator	ECHOEL	

#### **Extended Description:**

Heavy construction machinery and equipment

SCHEDULE OF EVENT	

<u>Line</u>	<u>Event</u>	Event Date
1	TECHNICAL QUESTION DEADLINE at 9:00 a.m. ET	2022-05-12

	Document Phase	Document Description	Page 3
DNR2200000033	I .	Addendum No. 01 - Wildlife: 15 Ton Steel Track Excavator	

#### ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

#### SOLICITATION NUMBER:

ARFQ DNR22\*33

Addendum Number:

No. 01

The purpose of this addendum is to modify the solicitation identified as ("Solicitation") to reflect the change(s) identified and described below.

#### Applicable Addendum Category:

[ X ]	Modify bid opening date and time
[ ]	Modify specifications of product or service being sought
[X]	Attachment of vendor questions and responses
[ ]	Attachment of pre-bid sign-in sheet
[ ]	Correction of error
r 1	Other

#### **Description of Modification to Solicitation:**

Addendum issued to publish and distribute the attached documentation to the vendor community.

- 1. To move bid due date to Tuesday May 24, 2022 at 1:30pm.
- 2. To address submitted questions.

NO OTHER CHANGES.

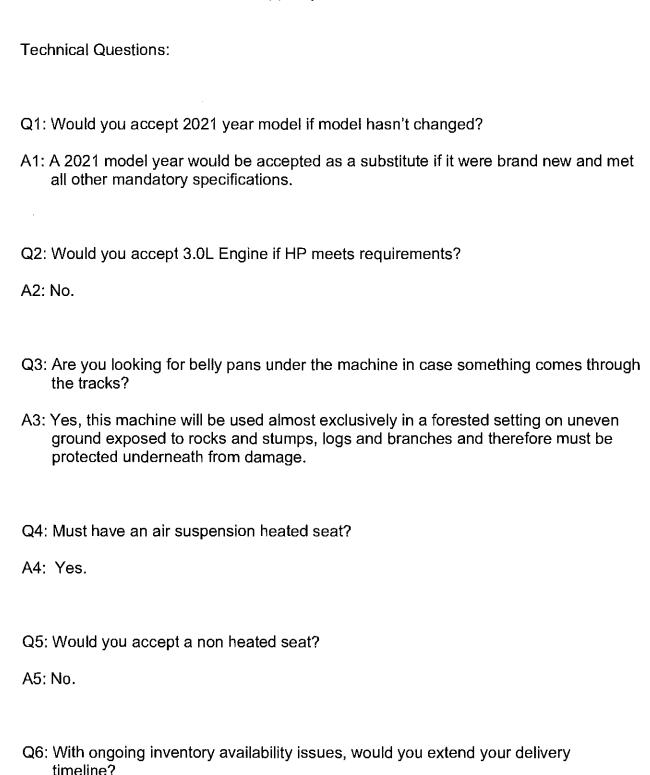
Additional Documentation: Documentation related to this Addendum (ifany) has been included herewith as Attachment A and is specifically incorporated herein by reference.

#### Terms and Conditions:

- 1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
- 2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

# **Attachment A**

#### Addendum No. 01 ARFQ DNR22\*33



A6: At this time, the specified delivery is reasonable.

## ADDENDUM ACKNOWLEDGEMENT FORM SOLICITATION NO.: ARFQ DNR22\*33

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Add to Dr. Deskinde	
Addendum Numbers Received:	uad)
(Check the box next to each addendum recei	veu)
Addendum No. 1	Addendum No. 6
Addendum No. 2	Addendum No. 7
Addendum No. 3	Addendum No. 8
Addendum No. 4	Addendum No. 9
Addendum No. 5	Addendum No. 10
I further understand that any verbal represent discussion held between Vendor's represent	ot of addenda may be cause for rejection of this bid. tation made or assumed to be made during any oral atives and any state personnel is not binding. Only d to the specifications by an official addendum is
Rudd Equipment comp Company	sonf. (nc.
Authorized Signature	
S/24(22 Date	

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

### STATE OF WEST VIRGINIA Purchasing Division

#### **PURCHASING AFFIDAVIT**

**CONSTRUCTION CONTRACTS:** Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

#### **DEFINITIONS:**

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

#### WITNESS THE FOLLOWING SIGNATURE:

Cross Lanes, WV 25313
My Commission Expires February 8, 2027

Vendor's Name: Ruad Equipment compo	any. Inc.
Authorized Signature: Land S	Date: 5-10-22
State of	
County of Kanawha , to-wit:	
Taken, subscribed, and sworn to before me this day of	, 2022
My Commission expires, 2027	
Official Seal  Notary Public, State of West Virginia  Leigh Torick  NOTARY PU	IBLIC Leigh settick

Purchasing Affidavit (Revised 01/19/2018)

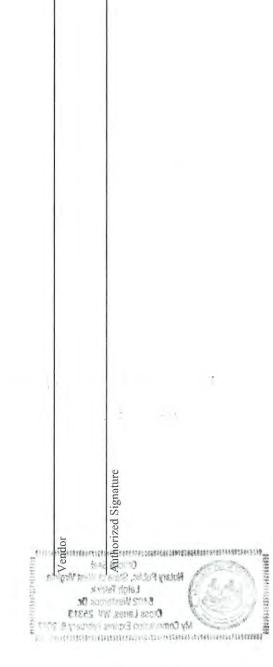
# **EXHIBIT A - PRICING PAGE**

# REQUEST FOR QUOTATION

WV Division of Natural Resources - Wildlife Resources Section 2022 or Current Model Year 15-ton Steel Tracked Excavator

Description	Make/Model of Item Being Bid	Qty	Unit Cost*
John Deere Model 130 G LC (Long Carriage) or Equal	JONO ECHOPL	7-1	4 (85, 122

\*Unit Cost MUST include delivery to WMA. See solicitation 6.1 for specification shipping address.

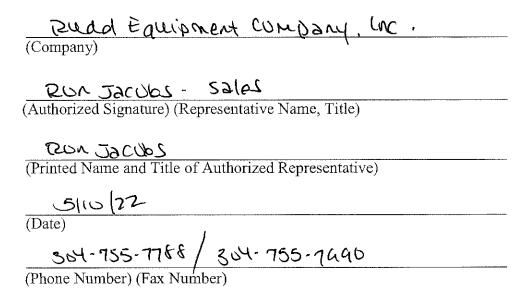


Date

**DESIGNATED CONTACT:** Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

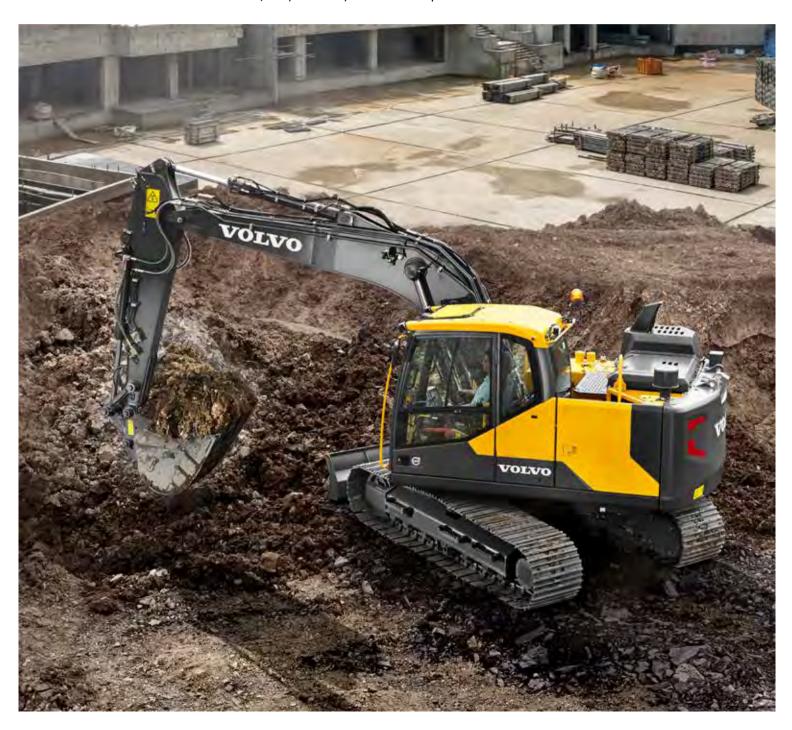
RUN Jacobs
(Name, Title)
29/62 - 29/02E VOZ
(Printed Name and Title)
80 Box 610, nifto, un 25143 (Address)
(Address)
304-755-7788
(Phone Number) / (Fax Number)
cjacobs-eruddeguipment.com
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.



# **EC140E**

Volvo Excavators 13.1-16.2 t / 28,880-35,620 lb 121 hp



# A passion for performance.

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

#### Helping you to do more

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

#### Designed to fit your needs

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





#### You learn a lot in 180 years

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

#### We're on your side

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

#### We have a passion for performance.

#### A strong, dedicated, capable dealer network.

Our dealers are strategically located throughout North America to provide the equipment you need and the parts and service support you demand for a productive and profitable operation. The strength of our dealer network is enhanced with extensive individualized product support training at our best-in-class Customer Center in Shippensburg and through hands-on training. Using a great Product Demonstration Center featuring a dedicated area for most commons applications, visitors operate equipment from our entire product line under a variety of simulated working conditions. This facility is in year-round use by our dealers and customers.

#### Building the best starts right here.

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

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





























Volvo Buses

Volvo Construction Equipment

Volvo Penta

Volvo Financial Services

## Efficient Effective Performance.

All the EC140E features have been designed to work in harmony to deliver every function with superior efficiency. The machine not only produces maximum uptime it also incorporates the latest fuel efficiency technology, to reduce emissions and consumption, while increasing productivity.

#### Volvo engine

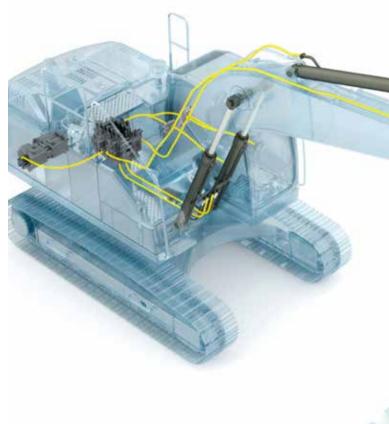
Featuring proven advanced technology, and built on decades of experience, Volvo's robust D4 Tier 4 Final engine boasts more power - while reducing both fuel consumption and emissions to deliver superior quality, reliability and durability.





#### Increased power

The increased engine power combined with the increased pump input power creates a highly responsive combined operation and travel. It also produces faster cycle times and low fuel consumption which leads to higher productivity.



#### **Boom float function**

With the boom float function, the pump power for boom lowering can be saved or used for other functions, reducing the cycle time. Also, the grading operation can be made easier.

#### Auto engine shutdown

To reduce fuel consumption, the engine will automatically switch off when the machine is inactive for a pre-set amount of time (five minutes is the default setting).

Main Control Valve and Software

This valve is compatible with software in the machine – building on the already superior controllability by providing a smooth and

easy operation. It is also compatible with Volvo's ECO mode -

this provides electronic pump control to enhance fuel efficiency.





# Easy to see why it's first choice.

Building on the already strong reputation for operator space and comfort, Volvo always strive for improvement – even when they are industry first choice. By putting operator comfort first the EC140E has developed a cab which has everything at the operator's fingertips. This not only increases well-being but will increase productivity without even trying.

#### Side view camera

As well as the rear view camera, side view camera can be optionally available for customers' comfort. Both views are displayed on the colour monitor, creating a safer working environment, protecting the operator and personnel on the ground.



# John C. Company Compan

#### Bluetooth®

To aid operator convenience and support better productivity, you can now connect a Bluetooth device to the machine enabling the handsfree function.

#### Short-cut key

For added convenience, functions such as windshield wipers, cameras, auto-mute or power max function can all be assigned a short-cut button on the joystick. This allows the operator to select a function during the application without disruption.





#### Seatbelt warning alarm

If the seatbelt is not buckled when the ignition key is turned, an alarm is triggered in intervals along with a continuous visual alert. This emphasises our priority for operator safety.

# Increasing your Expectations.

Volvo stands for quality and the EC140E is a symbol of this. It is a machine with a full armoury of state-of-the-art features but in every feature the number one priority is durability. Your working conditions are some of the most demanding and the EC140E responds through continued quality which you can be replied on.

#### **ROPS**

The cab features ROPS – this reinforced steel structure ensures the operator is protected in the unlikely event of the machine rolling over, while it also meets the ISO standards for safety.



#### Lower frame

The intelligently designed X-shape lower frame enables even weight distribution increasing stability and durability - preventing damage from rock and debris.

#### **Boom and Arm**

The robust design includes internal plates positioned to support pressure points during the range of applications. This helps disperse the stress from high-pressure areas of the boom and arm, to ensure maximum productivity time after time, during the most demanding applications.

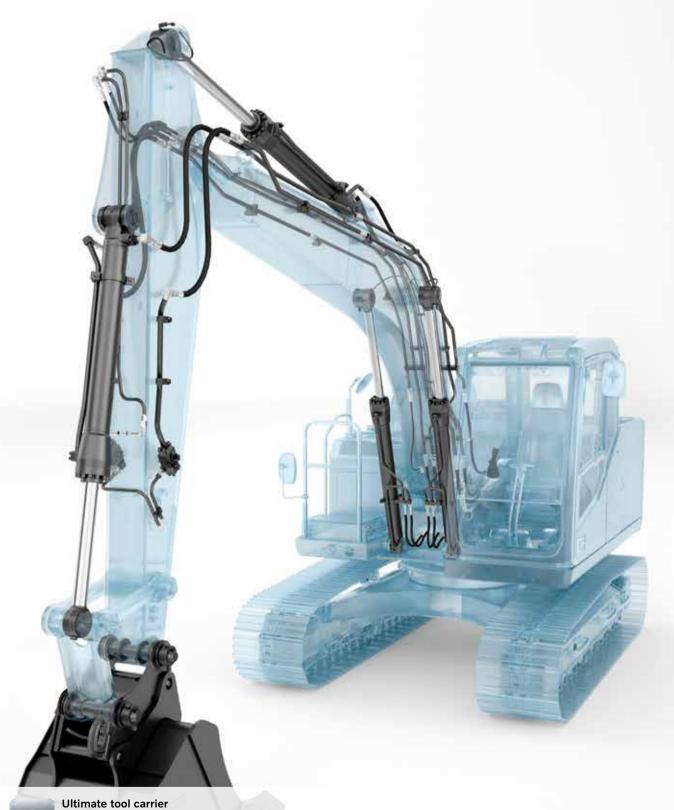




#### Undercarriage

The idlers, track links, upper and bottom rollers are built to withstand all elements and terrain, to create improved long-lasting durability and support maximum uptime.





# The machine can be adjusted to take a wide variety of hydraulic lines, which are factory fitted with breaker and shear piping (X1), as well as rotator piping (X3). State-of-the-art auxiliary lines provide the correct flow and pressure for special attachments such as mowers and grinders, shears, crushers and tilt rotators among other attachments. You can choose between the one or two pump flow to maximize profits and productivity.

### The Pick of the Bunch.

No customer has one job, so a machine should mirror these requirements. Volvo has listened to customer needs and built a machine in the EC140E that is not only capable of doing a variety of applications but can do them all at an unrivalled consistent quality – easily switching between attachments to maximize uptime and productivity.

#### Attachment Management System

The password protected management system allows storage for up to 20 different attachments. It pre-sets and permits hydraulic flow and pressure to be adjusted within the cab, which ensures the use of various attachments for increased versatility.



#### Extra piping

An additional piping solution is available on the breaker and shear piping (X1), accommodating the use of tilt/rotator attachments.





#### Electrical pedal

The electric pedal offers precise control to allow the operator to use a wider variety of attachments.



#### Response mode

The attachment response sensitivity can be adjusted using the keypad. This allows the operator to tailor machine response for maximum impact in different environments.

# Routine check-ups.

Proactive maintenance is crucial to prolong machine life – this is why making inspections safe and easy is a priority. Volvo have grouped access points together and made them safer to reach to ensure regular checks to maximise machine uptime while reducing the chances of any surprises.

#### **Grouped filters**

Filters are well grouped and easily accessible from the ground level. This facilitates the speed and ease of servicing.



# SERVICE Engine collinet 2A8 h Fuel titler/Natsh sell 438 h Hudnaulic oil

#### Service interval alerts

Real-time service alerts are displayed on the colour monitor to enable diagnostic checks. Separate service intervals include – the engine oil filter, fuel filter, water separator, hydraulic oil and hydraulic oil filter. This ensures peace of mind and maximum uptime.

#### Single layer cooling system

The radiator, charged air cooler and hydraulic oil cooler are situated side-by-side on a single layer, to maximize efficiency, reduce blockages and aid cleaning. The system is easily accessed from ground level by simply opening the side door.





#### Anti-slip steel plates

Well-positioned punched anti-slip plates provide superior grip and durability. The design facilitates easy cleaning while promoting safety.





# Mix and match for a superior fit.

Maximize your productivity and profitability with Volvo's EC140E crawler excavator and a range of durable attachments. Increase your versatility, access more applications and perform a variety of tasks – all while experiencing faster cycle times and excellent control.

#### Buckets - GP/HD/XD

Volvo's buckets are the perfect tool for digging and re-handling inl all conditions from soft, medium and hard materials. Heavy-duty buckets are intended for productive digging in compact materials. All provide maximum productivity and long life and feature original Volvo wear components.

#### Breakers HB14, HB15

The HB-Series of hydraulic breakers are optimized to the specific weights of Volvo machines and tailored to Volvo quick couplers for swift, safe and simple attachment changes. They are available with a full assortment of tools.









#### **Quick Coupler**

Volvo offers a full range of quick couplers, from its dedicated Volvo S-type coupler to the Steelwrist® ones. Both couplers feature Front Pin Lock technology, which allows supreme safety when changing attachments. Those innovative couplers are not only designed to fit perfectly with Volvo excavators but they also complies with the latest safety regulations of ISO 13031 and EN474-1.

Steelwrist® is a registered trademark of Steelwrist AB

#### Tilt Rotator

Volvo's tilt rotator can be ordered factory installed with multifunctional joysticks and color display that's fully integrated into the machine's system. The new series of Volvo XD excavator buckets are perfectly matched to the factory installed tilt rotator.

Improved total cost of

ownership.

#### Boom and arm

To achieve the best performance, select the most suitable boom and arm configuration combination for your requirements.

#### Ultimate tool carrier

Designed to not only be compatible with a range of attachments, but also to enhance their performance by easily and quickly switching to accommodate any needs.

#### **Optimized hydraulics**

Designed to perfectly match the engine power, reduce power loss, and improve controllability and response time.

#### Diesel Exhaust Fluid (DEF)

Volvo offers a total DEF solution that is quality assured, cost efficient and easily accessible. Contact your Volvo dealer for more information.

#### Boom float

The pump power for boom lowering can be saved or used for other functions, reducing the cycle time. Also, the grading operation can be made easier.

The password protected management system allows storage for up to 20 different attachments. It pre-sets and permits hydraulic flow and pressure to be adjusted within the cab.



#### Side view camera

Covers the visual blind spot at the side of machine. View is displayed on the colour monitor, creating a safer working environment, protecting the operator and personnel on the ground.

#### Short cut key function

For ease of use, functions such as windshield wipers, cameras, auto-mute or power max function can all be assigned a short-cut button on the joystick



#### **Built to last**

All detail – no matter how small - is overlooked. Silicone caulking is used to prevent rust, waterproof harnesses and connections have been installed - as well as heavy-duty door hinges and bolted-on protection for the framework lights.

#### Bluetooth®

Bluetooth and hands-free functions have been added, allowing the operator to connect to wireless functions for increased comfort and safety.

#### Service access

The E-series features a new convenient and safe access - such as guardrails - to check the hydraulic tank, fuel tank and Diesel Exhaust Fluid. This is in addition to the easily accessible side entry, through a wide compartment door.

#### Volvo engine

Volvo's D4 Tier 4 Final engine boasts more power while reducing both fuel consumption and emissions; delivering superior quality, reliability and durability.

#### **Grouped filters**

Filters are well grouped and easily accessible from the ground level. This facilitates the speed and ease of servicing.

# Adding value to your business.

Being a Volvo customer means having a complete set of services at your fingertips. Volvo can offer you a long-term partnership, protect your revenue and provide a full range of customer solutions using high quality parts, delivered by passionate people. Volvo is committed to the positive return of your investment.



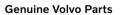


#### **Complete Solutions**

Volvo has the right solution for you. So why not let us provide all your needs throughout the whole life

cycle of your machine? By listening to your requirements, we can reduce your total cost of ownership and increase your revenue.





Our attention to detail is what makes us stand out. This proven concept acts as a solid investment in your machine's future. Parts are extensively tested and approved because every part is vital for uptime and performance. Only by using Genuine Volvo Parts, can you be sure that your machine retains the renowned Volvo quality.



#### Service Network

In order to respond to your needs faster, a Volvo expert is on their way to your job site from one of our Volvo facilities. With our extensive infrastructure of technicians, workshops and dealers, Volvo has a comprehensive network to fully support you using local knowledge and global experience.



### Volvo EC140E in detail.

#### **Engine**

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

Air Filter: 3-stage with precleaner

Automatic Idling System: Reduces engine speed to idle when the levers and pedals are not activated resulting in less fuel consumption and low cab noise levels.

Engine	\	/olvo		D4J
Max power at	r/s / r,	/min	33.3/	2 000
Net, ISO 9249/SAE J1349	kW	hp	89	119
Gross, ISO 14396/SAE J1995	kW	hp	90	121
Max power	Nm	lbf ft	566	417
at engine speed	r,	/min		1500
No. of cylinders				4
Displacement	- 1	in <sup>3</sup>	4.04	247
Bore	mm	in	101	3.98
Stroke	mm	in	126	4.96

#### **Electrical system**

Well protected high-capacity electrical system. Waterproof double-lock harness plugs are used to secure corrosion-free connections. The main relays and solenoid valves are shielded to prevent damage. The master switch is standard. Contronics provides advanced monitoring of machine functions and important diagnostic information.

24
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2

#### Swing system

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

Max. slew speed Max. slew torque	r/mi	ft 38.8	12.5
iviax. Siew torque	KINIII IDI	11 30.0	20,020

#### **Drive**

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

Max. drawbar pull	kN	lbf	119	26,680
Max. travel speed	km/h	mph	3.1/5.5	1.9/3.4
Gradeability		0		35

#### Undercarriage

Robust X-shaped frame with greased and sealed track chains as standard.

Track shoe				2 x 46
Link pitch	mm	in	171	6.8
Shoe width, triple grouser	mm	in	500/ 600/ 700/ 750	20/ 24/ 28/ 30
Shoe width, triple grouser (HD)	mm	in	600	24
Shoe width, rubber grouser	mm	in	500	20
Bottom rollers				2 x 7
Top rollers				2 x 1

#### **Hydraulic system**

The hydraulics system, combined with the fully electronic control system and advanced ECO mode, has been optimized to work in harmony with engine to match the engine power, reduce power loss and improve controllability and response time.

#### The following important functions are included in the system:

**Summation system:** Combines the flow of both hydraulic pumps to ensure quick cycle times and high productivity. **Arm priority:** Gives priority to the arm operation for faster cycle times in leveling and for increased bucket filling when digging.

**Swing priority:** Gives priority to swing functions for faster simultaneous operations.

**Regeneration system:** Prevents cavitation and provides flow to other movements during simultaneous operations for maximum productivity.

**Power boost:** All digging and lifting forces are increased. **Holding valves:** Boom and arm holding valves prevent the digging equipment from creeping.

#### Main pump

Туре	2 x va	riable d	isplacem pistoi	ent axial n pumps
Maximum flow	l/min	gpm	2 x 124	2 x 33
Pilot pump,				
Туре			Ge	ar pump
Maximum flow	l/min	gpm	1 x 20	1 x 5
Relief valve setting:				
Implement	MPa	psi	32.4 / 34.3	4,690 / 4,980
Travel circuit	MPa	psi	34.3	4,980
Slew circuit	MPa	psi	24.5	3,560
Pilot circuit	MPa	psi	3.9	570

#### **Hydraulic motors**

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

**Slew:** Fixed displacement axial piston motor with mechanical brake

Diano				
Hydraulic cylinders				
Mono boom				2
Bore x Stroke	ø x mm	ø x in	105 x 980	4.1 x 38.6
2 piece boom				1
Bore x Stroke	ø x mm	ø x in	160 x 765	6.3 x 30.1
Arm				1
Bore x Stroke	ø x mm	ø x in	120 x 1 045	4.7 x 41.1
Bucket				1
Bore x Stroke	ø x mm	ø x in	100 x 865	3.9 x 34.1
Dozer blade				2
Bore x Stroke	ø x mm	ø x in	130 x 270	5.1 x 10.6

#### Cab

The operator's cab has easy access via a wide door opening. The cab is supported on hydraulic dampening mounts to reduce shock and vibration levels. These along with sound absorbing lining provide low noise levels. The cab has excellent all-round visibility. The front windshield can easily slide up into the ceiling, and the lower front glass can be removed and stored in the side door. Integrated air-conditioning and heating system: The pressurized and filtered cab air is supplied by an automatically-controlled fan. The air is distributed throughout the cab from 14 vents.

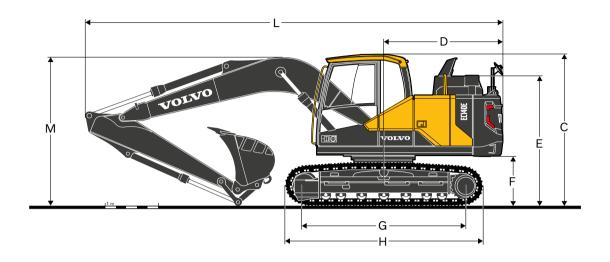
Ergonomic operator's seat: The adjustable seat and joystick console move independently to accommodate the operator. The seat has nine different adjustments plus a seat belt for the operator's comfort and safety.

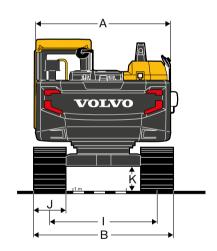
#### Sound Level

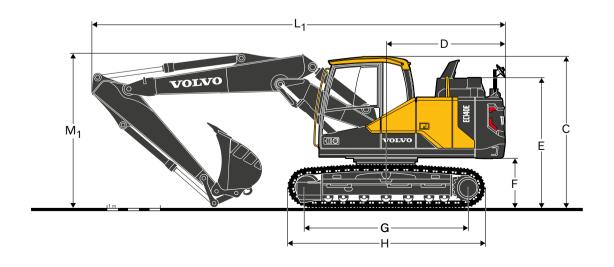
Sound pressure level in cab acc	ording to ISO 6396	
L <sub>pA</sub> (standard)	dB	69
L <sub>pA</sub> (tropical)	dB	70
External sound level according Directive 2000/14/EC	to ISO 6395, EU Nois	se
L <sub>wA</sub> (standard)	dB	100
L <sub>wA</sub> (tropical)	dB	101

# Specifications.

#### DIMENSIONS







#### DIMENSIONS

Description	nit	EC140EL								
Boom (mono & 2-piece)	(mono & 2-piece) m, ft i			4.6, 15'1"						
Arm	m	ft in	2.1	6'11"	2.5	8'2"	3	9'10"		
A Overall width of upper structure	mm	ft in	2 490	8'2"	2 490	8'2"	2 490	8'2"		
B Overall width	mm	ft in	2 590	8'6"	2 590	8'6"	2 590	8'6"		
C Overall height of cab	mm	ft in	2 800	9'2"	2 800	9'2"	2 800	9'2"		
D Tail swing radius	mm	ft in	2 200	7'3"	2 200	7'3"	2 200	7'3"		
E Overall height of engine hood	mm	ft in	2 400	7'10"	2 400	7'10"	2 400	7'10"		
F Counterweight clearance*	mm	ft in	920	3'0"	920	3'0"	920	3'0"		
G Tumbler length	mm	ft in	3 040	10'0"	3 040	10'0"	3 040	10'0"		
H Track length	mm	ft in	3 760	12'4"	3 760	12'4"	3 760	12'4"		
I Track gauge	mm	ft in	1990	6'6"	1990	6'6"	1990	6'6"		
J Shoe width	mm	ft in	600	2'0"	600	2'0"	600	2'0"		
K Min. ground clearance*	mm	ft in	436	1'5"	436	1'5"	436	1'5"		
L Overall length	mm	ft in	7 720	25'4"	7 720	25'4"	7 650	25'1"		
L, Overall length	mm	ft in	7 700	25'3"	7 660	25'2"	7 560	24'10"		
M Overall height of boom	mm	ft in	2 710	8'11"	2 830	9'3"	3 210	10'6"		
M, Overall height of boom	mm	ft in	2 720	8'11"	2 860	9'5"	3 310	10'10"		

<sup>\*</sup> Without shoe grouser

1 2-piece boom





Description		Unit		mono		<b>2-</b> pi	2-piece		Description Unit		Unit						
Boom		m	ft in	4.6	15'1"	4.6	15'1"	Arm		m	ft in	2.1	6'11"	2.5	8'2"	3.0	9'10"
Α	Length	mm	ft in	4 770	15'8"	4 765	15'8"	Α	Length	mm	ft in	2 800	9'2"	3 200	10'6"	2 700	8'10"
В	Height	mm	ft in	1370	4'6"	1 2 2 5	4'0"	В	Height	mm	ft in	710	2'4"	710	2'4"	710	2'7"
	Width	mm	ft in	545	1'9"	545	1'9"		Width	mm	ft in	300	1'0"	300	1'0"	300	1'0"
	Weight	kg	lb	1100	2,430	1900	4,190		Weight	kg	lb	555	1,220	625	1,380	685	1,510

<sup>\*</sup> Includes cylinder, piping and pin, excludes boom cylinder pin

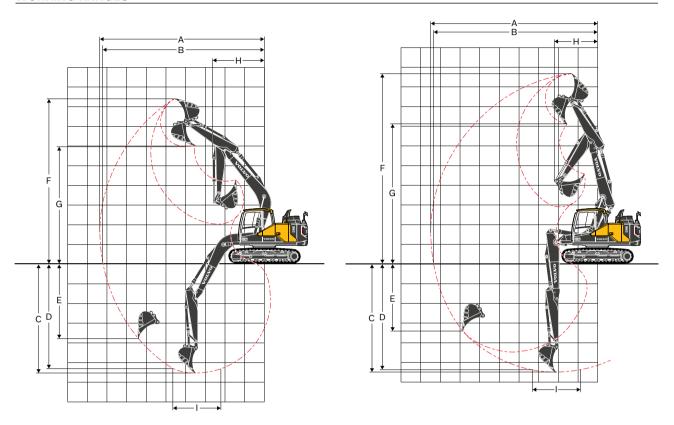


Fre	ont dozer blade	Uı	nit		
Α	Height	mm	ft in	580	1'11"
	Width	mm	ft in	2 590	8'6"
	Weight	kg	lb	458	1,260
В	Lift height	mm	ft in	480	1'7"
С	Digging depth	mm	ft in	600	2'0"

<sup>\*</sup> Includes cylinder, linkage and pin

# Specifications.

#### WORKING RANGES



Description	n		Uı	Unit EC140EL												
Boom			m, 1	ft in		4.	6, 15 <sup>'</sup>	1" mor	10		4.6, 15'1" 2-piece					
Arm			m	ft in	2.1	6'11"	2.5	8'2"	3.0	9'10"	2.1	6'11"	2.5	8'2"	3.0	9'10"
A Max.	digging reach		mm	ft in	7 980	26'2"	8 360	27'5"	8 850	29'0"	8 080	26'6"	8 460	27'9"	8 960	29'5"
B Max.	digging reach o	n ground	mm	ft in	7 840	25'9"	8 220	27'0"	8 720	28'7"	7 930	26'0"	8 320	27'4"	8 830	29'0"
C Max.	digging depth		mm	ft in	5 160	16'11"	5 5 6 0	18'3"	6 060	19'11"	5 080	16'8"	5 480	18'0"	5 980	19'7"
	digging depth m / 8' level)		mm	ft in	4 900	16'1"	5 340	17'6"	5 880	19'3"	4 960	16'3"	5 360	17'7"	5 870	19'3"
E Max. v	ertical wall dig	ging depth	mm	ft in	3 970	13'0"	4 3 3 0	14'2"	4 870	16'0"	3 970	13'0"	4 340	14'3"	4 830	15'10"
F Max. cutting height				ft in	8 120	26'8"	8 360	27'5"	8 710	28'7"	9 270	30'5"	9 630	31'7"	10 110	33'2"
G Max. dumping height				ft in	5720	18'9"	5 9 5 0	19'6"	6 2 9 0	20'8"	6 730	22'1"	7 100	23'4"	7 570	24'10"
H Min. front swing radius			mm	ft in	2 570	8'5"	2 630	8'8"	2 740	9'0"	1740	5'9"	1990	6'6"	2 410	7'11"
DIGGING	<b>FORCES WIT</b>	H DIRECT	FIT I	BUC	KET											
Bucket rad	dius		mm	ft in	1274	4'2"	1274	4'2"	1274	4'2"	1 274	4'2"	1 274	4'2"	1274	4'2"
Dunaliand	Normal	SAE J1179	kΝ	lbf	80.5	18,100	80.5	18,100	80.5	18,100	80.5	18,100	80.5	18,100	80.5	18,100
Breakout force -	Power boost	SAE J1179	kN	lbf	85.4	19,200	85.4	19,200	85.4	19,200	85.4	19,200	85.4	19,200	85.4	19,200
bucket	Normal	ISO 6015	kΝ	lbf	91.1	20,480	91.1	20,480	91.1	20,480	91.1	20,480	91.1	20,480	91.1	20,480
Ducket	Power boost	ISO 6015	kN	lbf	96.6	21,720	96.6	21,720	96.6	21,720	96.6	21,720	96.6	21,720	96.6	21,720
Tearout	Normal	SAE J1179	kΝ	lbf	69.6	15,640	62.1	13,960	55.2	12,420	69.6	15,640	62.1	13,960	55.2	12,420
force -	Power boost	SAE J1179	kN	lbf	73.8	16,590	65.9	14,800	58.6	13,170	73.8	16,590	65.9	14,800	58.6	13,170
dipper	Normal	ISO 6015	kΝ	lbf	71.5	16,070	63.5	14,280	56.3	12,660	71.5	16,070	63.5	14,280	56.3	12,660
arm	Power boost	ISO 6015	kN	lbf	75.8	17,040	67.4	15,150	59.7	13,430	75.8	17,040	67.4	15,150	59.7	13,430
Rotation angle, bucket				•		75	17			75		75		75		75

				4.0	6m / 15	'1" boo	m.	4.6m / 15'1" 2-piece boom							
EC140EL			2.5m / 8'2" arm, 440kg / 970lb - 540l / 143gal bucket, 2 450kg / 5,400lb counterweight												
Description	Shoe width		Operating weight		Ground pressure		Overall width		Operating weight		Ground pressure		Overall width		
	mm	in	kg	lb	kPa	psi	mm	in	kg	lb	kPa	psi	mm	in	
Without dozer bla	de														
	500	20	14 190	31,290	42.2	6.1	2 490	8'2"	14 610	32,220	43.1	6.3	2 490	8'2"	
Triple greeneer	600	24	14 390	31,730	35.3	5.1	2 590	8'6"	14 810	32,660	36.3	5.3	2 590	8'6"	
Triple grouser	700	28	14 590	32,170	31.4	4.6	2 690	8'10"	15 010	33,100	32.4	4.7	2 690	8'10"	
	750	30	14 770	32,570	29.4	4.3	2 740	9'0"	15 190	33,490	30.4	4.4	2 740	9'0"	
Triple grouser (HD)	600	24	14 460	31,880	36.3	5.3	2 590	8'6"	14 880	32,810	37.3	5.4	2 590	8'6"	
Rubber grouser	500	20	14 230	31,380	42.2	6.1	2 490	8'2"	14 650	32,300	43.1	6.3	2 490	8'2"	
With dozer blade															
	500	20	15 130	33,360	45.1	6.5	2 490	8'2"	15 550	34,290	46.1	6.7	2 490	8'2"	
<b>T</b> .d	600	24	15 330	33,800	38.2	5.5	2 590	8'6"	15 750	34,730	39.2	5.7	2 590	8'6"	
Triple grouser	700	28	15 530	34,240	33.3	4.8	2 690	8'10"	15 950	35,170	34.3	5.0	2 690	8'10"	
	750	30	15 710	34,640	31.4	4.6	2 740	9'0"	16 130	35,570	32.4	4.7	2 740	9'0"	
Triple grouser (HD)	600	24	15 400	33,960	38.2	5.5	2 590	8'6"	15 820	34,880	39.2	5.7	2 590	8'6"	
Rubber grouser	500	20	15 170	33,450	45.1	6.5	2 490	8'2"	15 590	34,380	46.1	6.7	2 490	8'2"	

BUCKET	BUCKET SELECTION GUIDE													
											EC14	IOEL		
Bucke	et type	Capacity Cutting width		-	Weight		Teeth	2 10	nm / 20' 0kg / 4,6 unterweig	30lb <sup>°</sup> ght	2 45 co	shoe, 00lb ght		
		m³	yd³	mm	ft	kg lb		EA	2.1m / 6'11" arm	2.5m / 8'2" arm	4.6m / 15 3.0m / 9'10" arm	2.1m / 6'11" arm	2.5m / 8'2" arm	3.0m / 9'10" arm
		0.66	0.86	1 050	41.34	480	1.059	4	С	С	С	С	С	С
		0.77	1.01	1200		541	1.193	5	C	С	В	С	С	С
	General	0.25	0.33	450	17.72	330	729	3	С	С	С	С	С	С
	purpose	0.33	0.43	600	23.62	361	797	3	С	С	С	С	С	С
Direct fit		0.42	0.55	750	29.53	392	864	3	С	С	С	С	С	С
<b>Buckets</b>		0.54	0.71	900	35.43	440	971	4	С	С	С	С	С	С
		0.25	0.33	450	17.72	320	705	3	D	D	D	D	D	D
	Heavy	0.33	0.43	600	23.62	352	777	3	D	D	D	D	D	D
	duty	0.42	0.55	750	29.53	384	848	3	D	D	D	D	D	D
		0.54	0.71	900	35.43	445	981	4	D	D	D	D	D	D

 $Please\ consult\ with\ your\ Volvo\ dealer\ for\ the\ proper\ match\ of\ buckets\ and\ attachments\ to\ suit\ the\ application.$ 

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 materal density

	kg/m³	lb/yd³	
Α	1200 - 1300	2,000 - 2,200	Coal, Caliche, Shale
В	1400 - 1600	2,300 - 2,700	Wet earth and clay, Limestone, Sandstone
С	1700 - 1800	2,800 - 3,100	Granite, Wet sand, Well blasted rock
D	> 1900	> 3,200	Wet mud, Iron ore

# Specifications.

#### LIFTING CAPACITY EC140EL without dozer blade

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.

For lifting capacity including													
	Liftii		1.5m	, 5 ft	3.UM	, 10 ft	4.5m	, 15 ft	6.UM	, 20 ft		Max. Reach	1
	hoo relate grou leve	d to nd	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	*3 320	*3 320	-	-	*3 500	3 390	4.9 m
Arm: 2.1m / 6'11"	20 ft	Ιb	-	-	-	-	*7,470	*7,470	-	-	*7,730	7,710	15.8 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	*3 470	*3 470	-	-	*3 570	2 450	6.0 m
CWT: 2 100kg / 4,630lb	15 ft	lb	-	-	-	-	*7,600	*7,600	-	-	*7,850	5,470	19.5 ft
	3 m	kg	-	-	*6 230	*6 230	*4 330	3 700	3 710	2 410	3 220	2 090	6.5 m
	10 ft	lb	-	-	*13,270	*13,270	*9,380	7,950	7,950	5,160	7,130	4,620	21.4 ft
	1.5 m	kg	-	-	-	-	*5 390	3 490	3 620	2 320	3 040	1960	6.7 m
	5 ft	lb	-	-	-	-	*11,650	7,490	7,770	4,990	6,710	4,320	22.0 ft
	0 m	kg	-	-	*5 400	*5 400	5 460	3 350	3 550	2 260	3 120	2 000	6.5 m
	0 ft	lb	-	-	*12,670	*12,670	11,680	7,190	7,620	4,850	6,890	4,410	21.5 ft
	-1.5 m	kg	*5 010	*5 010	*9 440	6 080	5 410	3 310	-	-	3 540	2 250	6.0 m
	-5 ft	lb	*11,310	*11,310	*20,480	13,010	11,590	7,110	-	-	7,830	4,980	19.6 ft
	-3 m	kg	-	-	*8 220	6 200	*5 470	3 380	-	-	4 800	3 000	4.9 m
D 40 (1511)	-10 ft	lb	-	-	*17,740	13,280	*11,710	7,270	-	-	*10,660	6,710	16.0 ft
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	*2 840	*2 840	-	-	*3 210	2 920	5.4 m
Arm: 2.5m / 8'2"	20 ft	lb	-	-	-	-	*6,350	*6,350	+0.100	0.470	*7,080	6,600	17.5 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	*3 080	*3 080	*3 190	2 470	*3 170	2 210	6.4 m
CWT: 2 100kg / 4,630lb	15 ft	lb	-	-	±= 000	+5.000	*6,740	*6,740	*7,080	5,310	*7,000	4,920	20.9 ft
	3 m	kg	-	-	*5 330	*5 330	*3 950	3 720	*3 490	2 410	2 950	1 910	6.9 m
	10 ft	lb	-	-	*11,370	*11,370	*8,570	8,030	*7,630	5,190	6,520	4,230	22.7 ft
	1.5 m	kg	-	-	-	-	*5 070	3 490	3 600	2 310	2 790	1800	7.1 m
	5 ft	lb	-	-	*16,030	13,570	*10,980	7,530	7,770	4,980	6,170	3,970	23.3 ft
	0 m	kg	-	-	*5 970	*5 970	5 420	3 320	3 520	2 230	2 850	1820	6.9 m
	0 ft	lb	+4.550	+4.550	*13,890	12,940	11,670	7,170	7,580	4,820	6,300	4,030	22.7 ft
	-1.5 m	kg	*4 550	*4 550	*9 610	5 980	5 350	3 260	3 480	2 200	3 180	2 020	6.4 m
	-5 ft	lb	*10,250	*10,250	*20,840	12,870	11,510	7,030	7,520	4,760	7,030	4,470	21.0 ft
	-3 m	kg	*8 940	*8 940 *20,220	*8 690	6 080	5 390	3 300	-	-	4 080	2 570	5.4 m
Dansa 4 Co. / 15 1	-10 ft	lb	*20,220	-20,220	*18,770	13,070	11,610	7,120	*2 860	2 490	9,120 *2 810	5,730 2 460	17.7 ft 6.0 m
Boom: 4.6m / 15'1" Arm: 3.0m / 9'10"	6 m 20 ft	kg	-	-	-	-	-	-	-2 000	2 490		5,540	19.6 ft
Arm: 3.0m / 9'10" Shoe: 600mm / 24"	4.5 m	lb	_		-	_		-	*2 780	2 490	*6,250 *2 640	1940	6.9 m
CWT: 2 100kg / 4,630lb	4.5 m	kg lb	-	-	-	-	-	-	*6,140	5,360	*5,830	4,310	22.7 ft
CVV1. 2 100kg/ 4,030lb	3 m	kg				_	*3 440	*3 440	*3 140	2 410	*2 630	1700	7.4 m
	10 ft	lb	_	_	_	_	*7,460	*7,460	*6,870	5,190	*5,800	3,760	24.3 ft
	1.5 m	kg	_		*7 320	6 420	*4 620	3 500	3 600	2 300	2 510	1 600	7.6 m
	5 ft	lb	-	-	*15,710	13,840	*10,010	7,560	7,750	4,960	5,540	3,540	24.9 ft
	0 m	kg	-	-	*6 510	5 990	5 410	3 300	3 490	2 200	2 550	1620	7.4 m
	0 ft	lb	-	-	*15,160	12,890	11,630	7,120	7,520	4,750	5,620	3,570	24.4 ft
	-1.5 m	kg	*3 990	*3 990	*8 760	5 880	5 290	3 200	3 430	2 150	2 790	1760	6.9 m
	-5 ft	lb	*8,970	*8,970	*20,130	12,650	11,380	6,910	7,390	4,630	6,170	3,900	22.7 ft
	-3 m	kg	*7 370	*7 370	*9 080	5 930	5 300	3 210	3 460	2 170	3 420	2 150	6.0 m
	-10 ft	lb	*16,640	*16,640	*19,640	12,760	11,400	6,920	-	-	7,620	4,790	19.7 ft
	-4.5		-	-	*7 210	6 140		-	-		*4 480	3 360	4.5 m
	m	kg											
Daniel 4 Cm / 45 41	-15 ft	lb			*15,330	13,220	*2.200	*2.200	-		*9,920	7,690	14.4 ft
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	*3 320	*3 320	-	-	*3 500	*3 500	4.9 m
Arm: 2.1m / 6'11"	20 ft	lb	-	-	-	-	*7,470	*7,470	-	-	*7,730	*7,730	15.8 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	*3 470	*3 470	-	-	*3 570	2 610	6.0 m
CWT: 2 450kg / 5,400lb		lb	_	-	*6.020	*6 220	*7,600	*7,600	*2 750	2.550	*7,850	5,820	19.5 ft
	3 m 10 ft	kg	-	-	*6 230 *13,270	*6 230 *13,270	*4 330 *9,380	3 910	*3 750	2 550 5,500	3 400 7,530	2 230	6.5 m
		lb	_	_	10,270	10,270	*5 390	8,440 3 700	*8,210			4,940	21.4 ft
	1.5 m	kg	-	_	-	-			3 800	2 470	3 220	2 100	6.7 m
	5 ft	lb	_		*5 400	*5 400	*11,650	7,990	8,200	5,330	7,100	4,630 2 140	22.0 ft 6.5 m
	0 m	kg	-	-	*12,670		5 730 12,340	3 560	3 730	2 410	3 300		
	-1.5 m	lb	*5 010	*5 010	*9 440	*12,670 6 460	5 690	7,690 3 520	8,050	5,200	7,280 3 740	4,720 2 410	21.5 ft 6.0 m
	-1.5 m	kg lb	*11,310		*20,480	13,880	12,240	7,610	-	-	8,280	5,330	19.6 ft
	-3 m	kg	-	-	*8 220	6 580	*5 470	3 590		-	*4 820	3 200	4.9 m
		lb	_	_	*17,740	14,150	*11,710	7,770	-			7,160	16.0 ft
Notes: 1 Machine in "Fine Mode	•										,	,	

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

#### LIFTING CAPACITY EC140EL without dozer blade

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.

Tot many capacity meraani	g zuono	, , , , , , ,								00 0			
	Lifti		1.5m	, 5 ft	3.0m	, 10 ft	4.5m	, 15 ft	6.0m	, 20 ft		Max. Reacl	1
	hoo relate grou leve	d to ind	Along UC	Across UC									
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	*2 840	*2 840	-	-	*3 210	3 100	5.4 m
Arm: 2.5m / 8'2"	20 ft	Ιb	-	-	-	-	*6,350	*6,350	-	-	*7,080	7,010	17.5 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	*3 080	*3 080	*3 190	2 630	*3 170	2 350	6.4 m
CWT: 2 450kg / 5,400lb	15 ft	lb	-	-	-	-	*6,740	*6,740	*7,080	5,660	*7,000	5,250	20.9 ft
	3 m	kg	-	-	*5 330	*5 330	*3 950	3 950	*3 490	2 560	3 110	2 040	6.9 m
	10 ft	lb	-	-	*11,370	*11,370	*8,570	8,520	*7,630	5,530	6,890	4,520	22.7 ft
	1.5 m	kg	-	-	-	-	*5 070	3 720	3 810	2 470	2 960	1930	7.1 m
	5 ft	lb	-	-	*16,030	14,450	*10,980	8,020	8,200	5,330	6,530	4,260	23.3 ft
	0 m	kg	-	-	*5 970	*5 970	5 730	3 550	3 720	2 390	3 020	1960	6.9 m
	0 ft	lb	-	-	*13,890	13,820	12,320	7,670	8,020	5,160	6,670	4,320	22.7 ft
	-1.5 m	kg	*4 550	*4 550	*9 610	6 3 9 0	5 650	3 490	3 690	2 3 6 0	3 360	2 170	6.4 m
	-5 ft	lb	*10,250	*10,250	*20,840	13,740	12,170	7,530	7,950	5,100	7,440	4,790	21.0 ft
	-3 m	kg	*8 940	*8 940	*8 690	6 480	5 700	3 520	-	-	4 320	2 750	5.4 m
	-10 ft	lb	*20,220	*20,220	*18,770	13,940	12,260	7,610	-	-	9,630	6,130	17.7 ft
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	-	-	*2 860	2 650	*2 810	2 620	6.0 m
Arm: 3.0m / 9'10"	20 ft	lb	-	-	-	-	-	-	-	-	*6,250	5,890	19.6 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	-	-	*2 780	2 650	*2 640	2 070	6.9 m
CWT: 2 450kg / 5,400lb	15 ft	lb	-	-	-	-	-	-	*6,140	5,710	*5,830	4,610	22.7 ft
	3 m	kg	-	-	-	-	*3 440	*3 440	*3 140	2 570	*2 630	1820	7.4 m
	10 ft	lb	-	-	-	-	*7,460	*7,460	*6,870	5,540	*5,800	4,030	24.3 ft
	1.5 m	kg	-	-	*7 320	6 830	*4 620	3 730	*3 680	2 460	2 660	1720	7.6 m
	5 ft	lb	-	-	*15,710	14,710	*10,010	8,060	*8,020	5,300	5,870	3,800	24.9 ft
	0 m	kg	-	-	*6 510	6 400	*5 620	3 530	3 690	2 360	2 700	1740	7.4 m
	0 ft	lb	-	-	*15,160	13,760	*12,180	7,610	7,950	5,090	5,960	3,840	24.4 ft
	-1.5 m	kg	*3 990	*3 990	*8 760	6 290	5 600	3 430	3 630	2 310	2 9 6 0	1900	6.9 m
	-5 ft	lb	*8,970	*8,970	*20,130	13,520	12,040	7,400	7,830	4,980	6,540	4,190	22.7 ft
	-3 m	kg	*7 370	*7 370	*9 080	6 340	5 600	3 430	3 660	2 3 3 0	3 620	2 310	6.0 m
	-10 ft	lb	*16,640	*16,640	*19,640	13,630	12,050	7,410	-	-	8,060	5,140	19.7 ft
	-4.5 m	kg	-	-	*7 210	6 540	-	-	-	_	*4 480	3 590	4.5 m
	-15 ft	lb	-	-	*15,330	14,100	-	-	-	-	*9,920	8,210	14.4 ft
	-11 /-	_	.) 6 11611						007 1104				

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 EC140EL with dozer blade

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

	Lifti		1.5m	, 5 ft	3.0m	, 10 ft	4.5m	, 15 ft	6.0m	, 20 ft	I	Max. Reach	1
	hoo relate grou leve	d to ind	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	*3 320	*3 320	-	-	*3 500	*3 500	4.9 r
Arm: 2.1m / 6'11"	20 ft	lb	-	-	-	-	*7,470	*7,470	-	-	*7,730	*7,730	15.8
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	*3 470	*3 470	-	-	*3 570	2 770	6.0 r
CWT: 2 100kg / 4,630lb	15 ft	lb	-	-	-	-	*7,600	*7,600	-	-	*7,850	6,170	19.5
	3 m	kg	-	-	*6 230	*6 230	*4 330	4 160	*3 750	2 710	*3 710	2 370	6.5 r
	10 ft	lb	-	-	*13,270	*13,270	*9,380	8,980	*8,210	5,840	*8,170	5,240	21.4
	1.5 m	kg	-	-	-	-	*5 390	3 950	*4 170	2 630	*3 910	2 230	6.7 r
	5 ft	lb	-	-	-	-	*11,650	8,520	*9,100	5,670	*8,610	4,920	22.0
	0 m	kg	-	-	*5 400	*5 400	*6 100	3 810	*4 520	2 560	*4 160	2 280	6.5 r
	0 ft	lb	-	-	*12,670	*12,670	*13,220	8,210	*9,820	5,530	*9,170	5,020	21.5
	-1.5 m	kg	*5 010	*5 010	*9 440	6 990	*6 220	3 770	-	-	*4 470	2 560	6.0 r
	-5 ft	lb	*11,310	*11,310	*20,480	15,020	*13,490	8,130	-	-	*9,870	5,670	19.6
	-3 m	kg	-	-	*8 220	7 120	*5 470	3 840	-	-	*4 820	3 410	4.9 r
	-10 ft	lb	-	-	*17,740	15,300	*11,710	8,290	-	-	*10,660	7,640	16.0
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	*2 840	*2 840	-	-	*3 210	*3 210	5.4 r
Arm: 2.5m / 8'2"	20 ft	lb	-	-	-	-	*6,350	*6,350	+0.400	- 0.700	*7,080	*7,080	17.5
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	*3 080	*3 080	*3 190	2 790	*3 170	2 500	6.4 r
CWT: 2 100kg / 4,630lb	15 ft	lb	-	-	+F 000	+F 000	*6,740	*6,740	*7,080	6,000	*7,000	5,560	20.91
	3 m	kg	-	-	*5 330	*5 330	*3 950	*3 950	*3 490	2 720	*3 160	2 170	6.9 n
	10 ft	lb	-	-	*11,370	*11,370	*8,570	*8,570	*7,630	5,870	*6,970	4,800	22.7 1
	1.5 m	kg	-	-	+40.000	-	*5 070	3 960	*3 970	2 620	*3 340	2 050	7.1 n
	5 ft	lb	-	-	*16,030	15,610	*10,980	8,560	*8,660	5,660	*7,360	4,520	23.3 1
	0 m	kg	-	-	*5 970	*5 970	*5 920	3 800	*4 400	2 540	*3 740	2 080	6.9 n
	0 ft	lb	*4.550	*4.550	*13,890	*13,890	*12,830	8,190	*9,560	5,490	*8,260	4,600	22.7 f
	-1.5 m	kg	*4 550	*4 550	*9 610	6 930	*6 220	3 730	*4 520	2 510	*4 150	2 310	6.4 n
	-5 ft	lb	*10,250 *8 940	*10,250	*20,840	14,880	*13,470	8,050	*9,780	5,430	*9,180 *4 510	5,100	21.0 f
	-3 m -10 ft	kg lb	*20,220	*8 940 *20,220	*8 690 *18,770	7 020	*5 770 *12,430	3 770 8,140	-	-	*9,960	2 930 6,540	5.4 n 17.7 f
Boom: 4.6m / 15'1"	6 m	kg	20,220	20,220	10,770	13,090	12,430	- 0,140	*2 860	2 810	*2 810	2 770	6.0 n
Arm: 3.0m / 9'10"	20 ft	lb	_	_	-	_	_	-	2 000	2010	*6,250	6,240	19.6
Shoe: 600mm / 24"	4.5 m	kg	_			_	_		*2 780	*2 780	*2 640	2 200	6.9 r
CWT: 2 100kg / 4,630lb	15 ft	lb	-	_	_	_	-	-	*6,140	6,050	*5,830	4,890	22.7
CVV1. 2 100kg/ 4,000lb	3 m	kg	_	_	_	_	*3 440	*3 440	*3 140	2 730	*2 630	1930	7.4 r
	10 ft	lb	-	_	-	_	*7,460	*7,460	*6,870	5,880	*5,800	4,280	24.3
	1.5 m	kg	_	_	*7 320	*7 320	*4 620	3 980	*3 680	2 610	*2 760	1830	7.6 r
	5 ft	lb	-	-	*15,710	*15,710	*10,010	8,590	*8,020	5,640	*6,070	4,050	24.9 f
	0 m	kg	_	_	*6 510	*6 510	*5 620	3 770	*4 190	2 510	*3 040	1850	7.4 n
	0 ft	lb	-	_	*15,160	14,910	*12,180	8,140	*9,110	5,420	*6,700	4,090	24.4 f
	-1.5 m	kg	*3 990	*3 990	*8 760	6 820	*6 110	3 670	*4 460	2 460	*3 590	2 020	6.9 n
	-5 ft	lb	*8,970	*8,970	*20,130	14,660	*13,240	7,920	*9,680	5,310	*7,960	4,470	22.7 f
	-3 m	kg	*7 370	*7 370	*9 080	6 880	*5 950	3 680	*4 160	2 480	*4 100	2 460	6.0 n
	-10 ft	lb	*16,640	*16,640	*19,640	14,780	*12,860	7,940	-	-	*9,070	5,480	19.7 f
	-4.5	kg		-	*7 210	7 090	-				*4 480	3 840	4.5 n
	m 15 ft												
Danier 4 Con / 4 5 14 11	-15 ft	lb	_	-	*15,330	15,260	*2.200	*2.200	-	_	*9,920	8,780	14.4 f
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	*3 320	*3 320	-	-	*3 500	*3 500	4.9 n
Arm: 2.1m / 6'11"	20 ft	lb	-	-	-	-	*7,470	*7,470	-	-	*7,730	*7,730	15.8 f
Shoe: 600mm / 24"	4.5 m		-	-	-	-	*3 470	*3 470	-	-	*3 570	2 930	6.0 n
CWT: 2 450kg / 5,400lb		lb	-	-	*6.220	*6.020	,	*7,600	*2 750	2 970	*7,850 *2.710	6,540	19.5 1
	3 m 10 ft	kg	-	-	*6 230	*6 230	*4 330	*4 330	*3 750	2 870	*3 710	2 520	6.5 n
		lb	-	-	10,270	*13,270	*9,380 *5.390	*9,380	*8,210 *4.170	6,200	*8,170 *3,910	5,570 2 370	21.4 f
	1.5 m		-	-	-	-	*5 390	4 180	*4 170	2 790	*3 910		6.7 n
	5 ft	lb	-	-	*5.400	*5.400	*11,650	9,030	*9,100	6,020	*8,610	5,240	22.01
	0 m	kg	-	-	*5 400	*5 400	*6 100	4 040	*4 520	2 730	*4 160	2 420	6.5 r
	0 ft	lb	*E 010	*5.010	,	*12,670	*13,220	8,730	*9,820	5,890	*9,170	5,350	21.5 f
	-1.5 m		*5 010	*5 010	*9 440	7 420	*6 220	4 010	-	-	*4 470	2 730	6.0 n
	-5 ft	lb	*11,310		*20,480	15,950		8,640	_	_	*9,870	6,040	19.6 f
	-3 m		-	-	*8 220	7 550	*5 470 *11 710	4 070	-	-	*4 820	3 630	4.9 n
	-10 ft	ID	-	-	*17,740	16,230	*11,710	8,810	-	-	*10,660	8,110	16.0 1

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 EC140EL with dozer blade

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.

	Lifti	ng	1.5m	, 5 ft	3.0m	, 10 ft	4.5m	, 15 ft	6.0m	, 20 ft		Max. Reach	1
	hoo relate grou leve	ok d to ind	Along UC	Across UC									
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	*2 840	*2 840	-	-	*3 210	*3 210	5.4 m
Arm: 2.5m / 8'2"	20 ft	Ιb	-	-	-	-	*6,350	*6,350	-	-	*7,080	*7,080	17.5 ft
Shoe: 600mm/24"	4.5 m	kg	-	-	-	-	*3 080	*3 080	*3 190	2 950	*3 170	2 650	6.4 m
CWT: 2 450kg / 5,400lb	15 ft	lb		-	-	-	*6,740	*6,740	*7,080	6,350	*7,000	5,900	20.9 ft
	3 m	kg	-	-	*5 330	*5 330	*3 950	*3 950	*3 490	2 890	*3 160	2 310	6.9 m
	10 ft	lb	-	-	*11,370	*11,370	*8,570	*8,570	*7,630	6,220	*6,970	5,110	22.7 ft
	1.5 m	kg	-	-	-	-	*5 070	4 200	*3 970	2 790	*3 340	2 180	7.1 m
	5 ft	lb	-	-	*16,030	*16,030	*10,980	9,070	*8,660	6,020	*7,360	4,820	23.3 ft
	0 m	kg	-	-	*5 970	*5 970	*5 920	4 040	*4 400	2 710	*3 740	2 220	6.9 m
	0 ft	lb	-	-	*13,890	*13,890	*12,830	8,710	*9,560	5,850	*8,260	4,900	22.7 ft
	-1.5 m	kg	*4 550	*4 550	*9 610	7 3 6 0	*6 220	3 970	*4 520	2 680	*4 150	2 460	6.4 m
	-5 ft	lb	*10,250	*10,250	*20,840	15,800	*13,470	8,570	*9,780	5,790	*9,180	5,440	21.0 ft
	-3 m	kg	*8 940	*8 940	*8 690	7 450	*5 770	4 010	-	-	*4 510	3 120	5.4 m
	-10 ft	lb	*20,220	*20,220	*18,770	16,010	*12,430	8,650	-	-	*9,960	6,950	17.7 ft
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	-	-	*2 860	*2 860	*2 810	*2 810	6.0 m
Arm: 3.0m / 9'10"	20 ft	lb	-	-	-	-	-	-	-	-	*6,250	*6,250	19.6 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	-	-	*2 780	*2 780	*2 640	2 330	6.9 m
CWT: 2 450kg / 5,400lb	15 ft	lb	-	-	-	-	-	-	*6,140	*6,140	*5,830	5,190	22.7 ft
	3 m	kg	-	-	-	-	*3 440	*3 440	*3 140	2 890	*2 630	2 060	7.4 m
	10 ft	lb	-	-	-	-	*7,460	*7,460	*6,870	6,230	*5,800	4,560	24.3 ft
	1.5 m	kg	-	-	*7 320	*7 320	*4 620	4 220	*3 680	2 780	*2 760	1960	7.6 m
	5 ft	lb	-	-	*15,710	*15,710	*10,010	9,110	*8,020	5,990	*6,070	4,320	24.9 ft
	0 m	kg	-	-	*6 510	*6 510	*5 620	4 010	*4 190	2 680	*3 040	1980	7.4 m
	0 ft	lb	-	-	*15,160	*15,160	*12,180	8,660	*9,110	5,780	*6,700	4,370	24.4 ft
	-1.5 m	kg	*3 990	*3 990	*8 760	7 250	*6 110	3 910	*4 460	2 620	*3 590	2 160	6.9 m
	-5 ft	lb	*8,970	*8,970	*20,130	15,580	*13,240	8,440	*9,680	5,670	*7,960	4,770	22.7 ft
	-3 m	kg	*7 370	*7 370	*9 080	7 310	*5 950	3 920	*4 160	2 650	*4 100	2 620	6.0 m
	-10 ft	lb	*16,640	*16,640	*19,640	15,700	*12,860	8,450	-	-	*9,070	5,840	19.7 ft
	-4.5 m	kg	-	-	*7 210	*7 210	-	-	-	-	*4 480	4 080	4.5 m
	-15 ft	lb	-	-	*15,330	*15,330	-	-	-	-	*9,920	9,330	14.4 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.

### Equipment.

#### STANDARD EQUIPMENT

#### **Engine**

Turbocharged, 4 stroke diesel engine with water cooling, direct injection and charged air cooler that meets Tier 4f requirements

Air filter with indicator

Air intake heater

Cyclone pre-cleaner

Electric engine shut-off

Fuel filter and water separator

Alternator, 80 A

Tropical cooling system (50 deg. C)

#### Electric/Electronic control system

Contronics

Advanced mode control system

Self-diagnostic system

Machine status indication

GSM/GPS Caretrack and 3yr-Caretrack subscription

Engine speed sensing power control

Automatic idling system

One-touch power boost

Safety stop/start function

Adjustable LCD color monitor

Master electrical disconnect switch

Engine restart prevention circuit

High-capacity halogen or LED lights:

Halogen

Frame-mounted: 2, Boom-mounted: 1

LED

Frame-mounted: 2, Boom-mounted: 2

Travel alarm

Batteries, 2 x 12 V / 100 Ah

Start motor, 24 V / 5.5 kW

#### Hydraulic system

Boom float function without HRV

Straight travel pedal

Pilot control pattern change

Automatic sensing hydraulic system

Summation system

Boom priority

Arm priority

Swing priority

ECO mode fuel saving technology

Boom, arm and bucket regeneration valves

Swing anti-rebound valves

Boom and arm holding valves

Multi-stage filtering system

Boom cylinders (x2)

Cylinder cushioning

Cylinder contamination seals

Auxiliary hydraulic valve

Automatic two-speed travel motors

Hydraulic oil, longlife oil 46

#### Frame

Access way with handrail

Tool storage area

Punched metal anti-slip plates

Under cover (heavy duty)

2 450kg / 5,400lb counterweight

#### **Cab and interior**

ROPS (ISO12117-2) certified cab

Silicon oil and rubber mounts with spring

Control lock out lever

Travel pedals and hand levers

Adjustable operator seat with heater and joystick control console

Control joysticks with 4 switches each

Heater & air-conditioner, automatic

Flexible antenna

Radio with MP3 and USB Jack with bluetooth

Cab, all-weather sound suppressed, includes:

Cup holders

Door locks

Tinted glass

Floor mat

Horn

Large storage area

Pull-up type front window

Removable lower windshield

Seat belt

Safety glass

Sun screens, front, roof, rear

Windshield wiper with intermittent feature

Rear view camera

Master key

#### Undercarriage

Under cover (heavy duty)

Hydraulic track adjusters

Greased and sealed track link

Track Guard

600mm / 24" with triple grousers

#### Digging equipment

4.6m / 15'1" mono boom

2.5m / 8'2" arm

Linkage

Manual centralized lubrication

#### **OPTIONAL EQUIPMENT**

#### **Engine**

Block heater: 120 V

Diesel coolant heater, 5 kW

Water separator with heater

Auto engine shutdown

Standard cooling system by fan clutch(40 deg. C)

Fuel filler pump: 30l/min / 9gpm

#### Electric

Extra work lights (Halogen or LED):

Cab-mounted 3

Counterweight-mounted 1

Anti-theft system

Rotating warning beacon

#### **OPTIONAL EQUIPMENT**

#### Hydraulic system

Boom hose rupture valve with overload warning device

Arm hose rupture valve

Boom float function with HRV

Hydraulic piping:

Work tool management system (up to 20 programmable memories)

Breaker & shear, 1 and 2 pump flow

Slope & rotator (40lpm / 11gpm or 60lpm / 16gpm)
Extra for slope & rotator

Grapple

Oil leak (drain) line

Quick coupler

Breaker & shear pressure pre-setting

Volvo hydraulic quick coupler S6, S6 without hook

Volvo hydraulic quick coupler VQC-HU,DR14 / RQC-HD, Steelwrist S60

Hydraulic oil, biodegradable 46

Hydraulic oil, ISO VG 32,42, 68

Hydraulic oil, longlife oil 32, 68

#### Cab and interior

Fabric seat without heater

Fabric seat with heater and air suspension

Control joysticks with semi-long

Control joysticks with 3 switch & 1 propotional

Opening top hatch

#### **Cab and interior**

Cab-mounted falling object guard (FOG)

Cab-mounted falling object protective structure (FOPS)

Rain shield

Side view camera

Smoker kit (ashtray and lighter)

Safety net for front window

Sunlight protection, roof (steel)

Lower wiper with intermittent control

Anti-vandalism kit

Specific key

#### Frame

2 100kg / 4,630lb counterweight

#### Undercarriage

Dozer blade

Full track guard

500mm / 20", 600mm / 24", 600mm / 24" HD, 700mm / 28", 750mm / 30" shoe with triple grousers and 500mm / 20" with rubber grousers

#### **Digging equipment**

4.6m / 15'1" 2-piece boom

2.1m / 6'11", 3.0m / 9'11" arm

Linkage with lifting eye

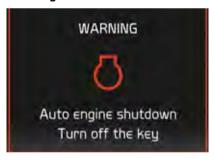
#### Service

Tool kit, daily maintenance

Tool kit, full scale

#### Selection of Volvo optional equipment

#### Auto engine shutdown



#### Two-piece boom



#### Fuel fill pump



#### **Diesel coolant heater**



#### Dozer blade







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.

