

E165 EVOLUTION



Net flywheel power **82 kW - 112 HP**

Maximum operating weight **18700 kg**

Bucket capacity **from 0.25 to 0.93 m³**



EVOLVING TECHNOLOGY

E165 EVOLUTION

- *Evolution in technology*
- *Evolution in productivity and low fuel consumption*
- *Evolution in comfort and safety*
- *Evolution in easy serviceability and maintenance*
- *Evolution in hydraulic system versatility and predisposition*



EVOLVING TECHNOLOGY



Specifications



Tier-2 emissioned engine

Net flywheel power (ISO 14396)82 kW / 112 HP
 Governed rpm2150
 Make and modelIVECO F4ED484E
 Typediesel 4-stroke, direct injection, turbocharged and intercooler
 Displacement.....3,9 l
 Number of cylinders4
 Bore x stroke102 x 120 mm
 Maximum torque at 1400 rpm450 Nm

Remote engine oil filter for easy replacement

Electronic engine rpm control, dial type

Auto-idling selector returns engine to minimum rpm when all controls are in neutral position

-20° outside temperature start as standard equipment (-25° optional)

The engine complies with EEC Standard 97/68 STAGE 2 and USA CARB EPA TIER 2 specifications



Electrical system

Voltage.....24 V
 Alternator70 A
 Starter motor.....4 kW
 Standard maintenance-free batteries2
 Capacity100 Ah



Hydraulic system

New S.H.S. (Smart Hydraulic System) for perfect controllability and simultaneity of all movements

New generation **A.I. (Artificial Intelligence)** on-board computer

A.P.S. (Automatic Priority System) device

Computerized pumps delivery and main control valve actuation in relation to manipulators stroke and working pressure demand

ESSC (Engine Speed Sensing Control device) for total installed hydraulic power exploitation

High definition E.T.S. (EASY TO USE) multi-function monitor incorporating:

- Maintenance programme
- Self Diagnosis System
- Operating Data Storage (engine rpm/operating pressure and the like)

M.W.S. Mechatronic Work Selector:

- **Standard Mode (W)** - Standard operating mode

- **Heavy/Mechatronic Mode (H/M)** - Maximum hydraulic power for top productivity. In this mode, the unit **"learns"** the type of operation being completed after 2 cycles and automatically selects maximum efficiency/speed and operating precision with the **A.P.S. (Automatic Priority System)** device

- **Attachments Mode (A)** - Possibility of selecting and storing delivery for supplementary tooling from the operator compartment

Continuous untimed insertion **Power Boost Device**. Continuous insertion of the device when selected ensures maximum diggability and productivity in the toughest applications.

Standard double pumps flow device

Pipe pressure discharge push button to facilitate tooling changeover without piping oil leakage.

Two-directional crusher/hammer system

Main pumps:

Two variable delivery pumps with electronic delivery adjustment.

Pumps automatically revert to zero delivery with controls in neutral.

Maximum delivery2 x 131 l/min

Piloting circuit gear type pump

Maximum delivery22 l/min

Maximum operating pressure:

Equipment/swing/travel34.3 MPa

Power boost37.8 MPa

Hydraulic cylindersdouble effect

- Lift (2) - bore x stroke110 x 1150 mm

- Penetration (1) - bore x stroke125 x 1290 mm

- Bucket (1) - bore x stroke105 x 1025 mm

- Positioning (only triple articulation)
 bore x stroke135 x 1000 mm

Independent hammer/positioning control



Transmission

Typehydrostatic, two-speed

Travel motors.....2, axial pistons type, double displacement

Brakesautomatic discs type

Final driveoil bath, planetary reduction

Gradeability (continuous)70% (35%)

Travel speeds:

lowfrom 0 to 3.0 km/h

highfrom 0 to 5.0 km/h

Automatic Down Shift device: to move travel motors to maximum displacement position with selector on "speed" position when greater traction is required.



Swing

Swing motor.....axial piston type

Swing brakeautomatic discs type

Final driveoil bath, planetary reduction

Swing ringoil bath type

Swing speed12.5 rpm



Cab and controls

Transparent upper cab roof.

Standard automatic conditioning.

Controlspiloted

Two cross path pattern levers actuate all equipment movements and superstructure swing.

Two pedals with detachable hand levers control all track movements, counter-rotation included.

A safety lever completely neutralizes the piloting circuit



Undercarriage

X-frame undercarriage design

Reinforced track chain with sealed bushings.

	E165	E165LC
Track rollers (each side)	2	2
Carrier rollers (each side)	7	7
Length of track on ground (mm)	3090	3280
Gauge (mm)	1990	2190
Shoes (mm)	500-600-700 800-900	500-600-700 800-900



Capacities

Engine litres

Lube oil15.0

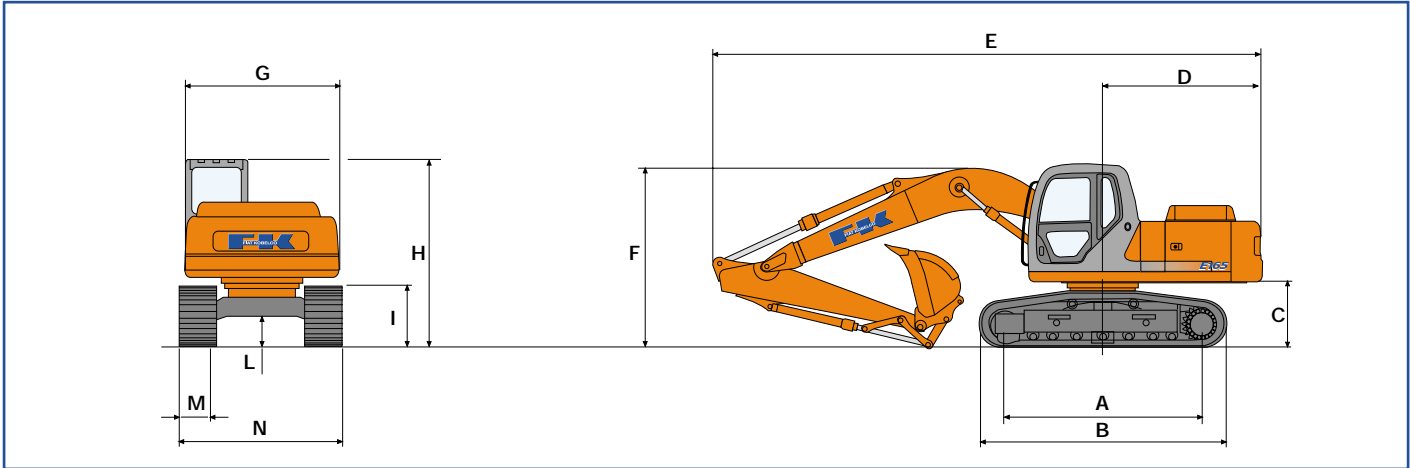
Coolant18.0

Fuel tank250

Hydraulic reservoir150

One-piece boom

Dimensions (mm) - Operating weight

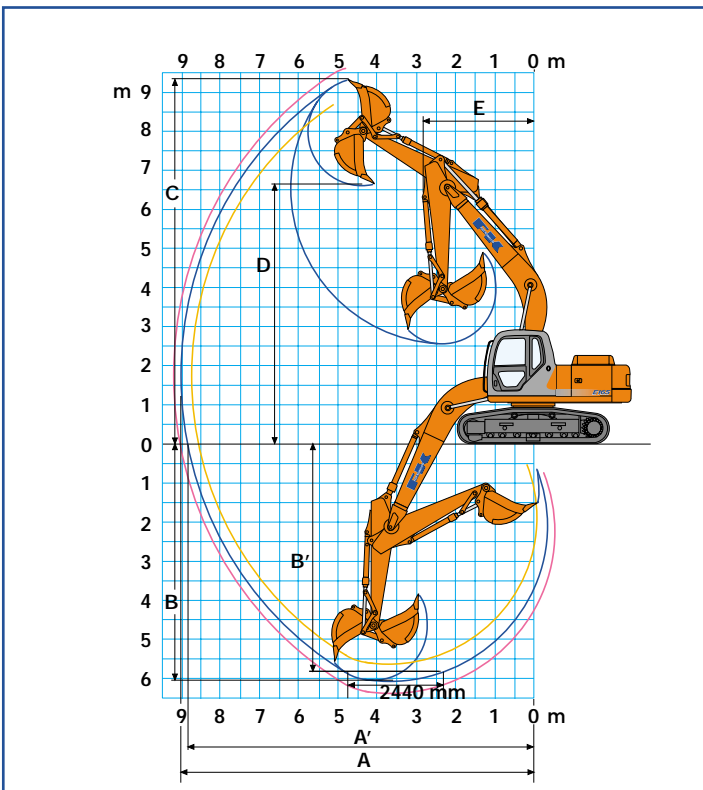


Versions	A	B	C	D	E(*)	F(*)	G	H	I	L
E165	3090	3895	1055	2510	(1) 8710	(1) 2980	2490	2960	955	490
					(2) 8660	(2) 2860				
					(3) 8670	(3) 2940				
E165LC	3280	4085	1055	2510	(1) 8710	(1) 2980	2490	2960	955	490
					(2) 8660	(2) 2860				
					(3) 8670	(3) 2940				

(*) dipper stick: (1) 2200 mm, (2) 2600 mm, (3) 3100 mm

		E165					E165LC				
M - Shoe width	mm	500	600	700	800	900	500	600	700	800	900
N - maximum width	mm	2490	2590	2690	2790	2890	2690	2790	2890	2990	3090
Operating weight	kg	17250	17500	17700	17950	18200	17550	17800	18000	18250	18500
Ground pressure	bar	0.57	0.48	0.42	0.37	0.33	0.55	0.46	0.40	0.36	0.32

Digging performance



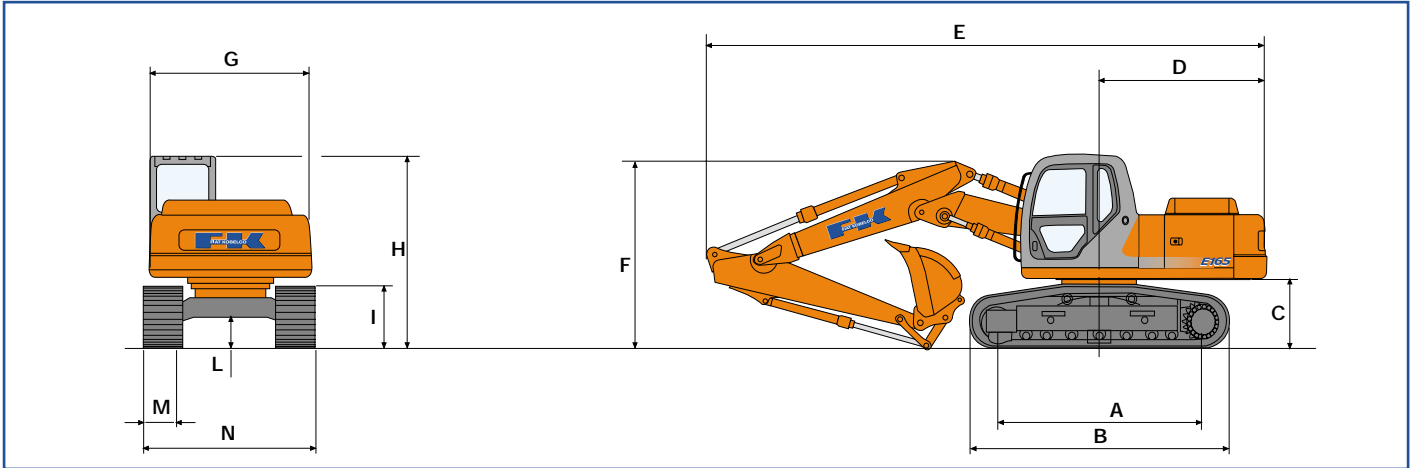
Dipper stick	mm	2200	2600	3100
A	mm	8675	9025	9520
A'	mm	8487	8845	9350
B	mm	5640	6040	6540
B'	mm	5395	5814	6355
C	mm	9165	9335	9695
D	mm	6490	6670	7010
E	mm	2295	2835	2890

Breakout force:				
Bucket	daN	11500	11500	11500
Dipper stick	daN	10400	8800	7400

With: Power Boost on:				
Bucket	daN	12500	12500	12500
Dipper stick	daN	11350	9600	8050

Triple articulation

Dimensions (mm) - Operating weight

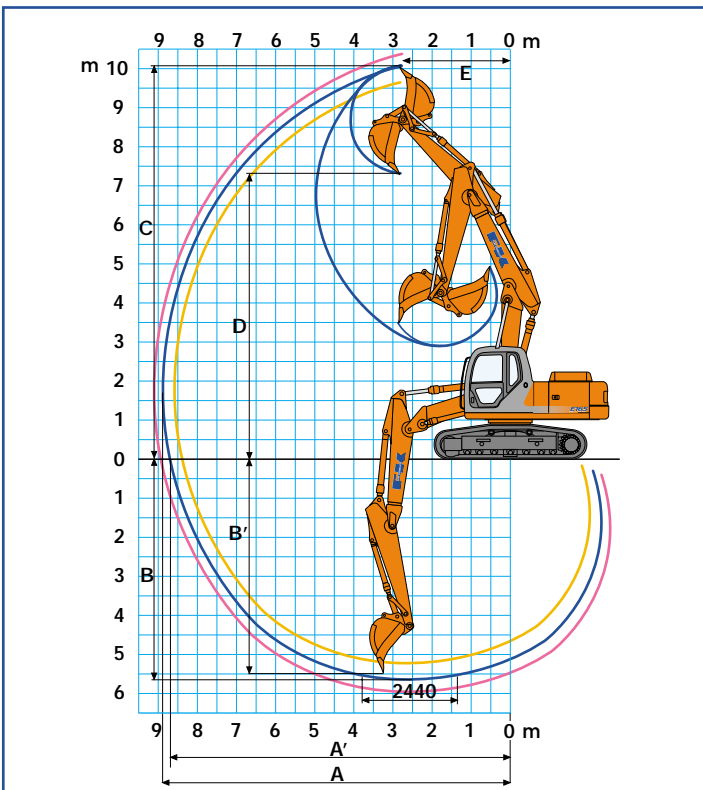


Versions	A	B	C	D	E(*)	F(*)	G	H	I	L
E165	3090	3895	1055	2510	(1) 8560	(1) 3000	2490	2960	955	490
					(2) 8510	(2) 2880				
					(3) 8510	(3) 2980				
E165LC	3280	4085	1055	2510	(1) 8560	(1) 3000	2490	2960	955	490
					(2) 8510	(2) 2880				
					(3) 8510	(3) 2980				

(*) Dipper stick: (1) 2200 mm, (2) 2600 mm, (3) 3100 mm

		E165					E165LC				
M - Shoe width	mm	500	600	700	800	900	500	600	700	800	900
N - maximum width	mm	2492	2592	2692	2792	2892	2692	2792	2892	2992	3092
Operating weight	kg	17450	17700	17950	18200	18400	17750	18000	18250	18500	18700
Ground pressure	bar	0.58	0.49	0.42	0.38	0.34	0.55	0.47	0.41	0.36	0.32

Digging performance



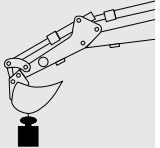
Dipper stick	mm	2200	2600	3100
A	mm	8535	8885	9385
A'	mm	8345	8705	9210
B	mm	5265	5650	6155
B'	mm	5140	5530	6045
C	mm	9085	10070	10500
D	mm	7060	7325	7755
E	mm	2350	2120	2180

Breakout force:				
Bucket	daN	11500	11500	11500
Dipper stick	daN	10400	8800	7400

With: Power Boost on:				
Bucket	daN	12500	12500	12500
Dipper stick	daN	11350	9600	8050

Lift capacity 2200 mm dipper stick

Unit: 1000 kg

	Radius of load									
	3.0 m		4.5 m		6.0 m		7.5 m		At max. reac	
	Front	Side	Front	Side	Front	Side	Front	Side	Front	Side

E165 - Triple articulation

Height	3.0 m		4.5 m		6.0 m		7.5 m		At max. reac		Reach m
+6.0m			4.1*	4.1*					4.3*	4.3*	5.8
+4.5m	6.1*	6.1*	4.4*	4.4*	4.2*	3.5			4.1	2.7	6.6
+3.0m	8.9*	8.9*	6.0*	4.9	4.5*	3.2			3.6	2.4	7.1
+1.5m	10.8*	7.7	7.0*	4.5	4.5*	3.0			3.4	2.3	7.2
0	10.0*	7.4	7.1	4.3	4.6	2.9			3.5	2.3	6.9
-1.5m	8.1*	7.9	6.9*	4.3	4.3	2.8			3.9	2.6	6.4
-3.0m	7.0*	7.0*	5.9	3.9					4.8*	3.0	5.3
-4.5m											

E165 - One-piece boom

Height	3.0 m		4.5 m		6.0 m		7.5 m		At max. reac		Reach m
+6.0m					3.7*	3.3			3.2*	3.2*	6.1
+4.5m			4.7*	4.7*	4.1*	3.3			3.2*	2.5	7
+3.0m	9.1*	9.1*	5.9*	4.9	4.6*	3.2			3.4	2.2	7.4
+1.5m			6.8*	4.5	4.6	2.9			3.3	2.1	7.5
0	8.6	8.0	7.1	4.3	4.5	2.8			3.4	2.1	7.6
-1.5m	10.1	8.1	7	4.2	4.4	2.8			3.8	2.4	7.0
-3.5m	8.3*	8.2	6.0*	4.3					4.4*	3.1	5.7
-4.5m	5.1*	5.1*							4.0*	4.0*	3.9

E165LC - Triple articulation

Height	3.0 m		4.5 m		6.0 m		7.5 m		At max. reac		Reach m
+6.0m			4.1*	4.1*					4.3*	4.3*	5.8
+4.5m	6.1*	6.1*	4.4*	4.4*	4.2*	3.7			4.1	3.1	6.6
+3.0m	8.9*	8.9*	6.0*	5.3	4.5*	3.6			3.8	2.7	7.1
+1.5m	10.8*	8.9	7.0*	5.2	4.5*	3.4			3.6	2.6	7.2
0	10.0*	8.6	7.1	4.9	4.6	3.3			3.5*	2.6	6.9
-1.5m	8.1*	8.1*	6.9*	5	4.3	3.3			4.2	3	6.4
-3.5m	7.0*	7.0*	5.9	4.1					4.8*	3.0	5.3
-4.5m											

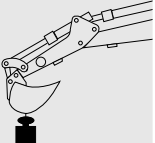
E165LC - One-piece boom

Height	3.0 m		4.5 m		6.0 m		7.5 m		At max. reac		Reach m
+6.0m					3.7*	3.7*			3.2*	3.2*	6.1
+4.5m			4.7*	4.7*	4.1*	3.7			3.2*	2.9	7
+3.0m	9.1*	9.1*	5.9*	5.5	4.6*	3.5			3.5*	2.5	7.4
+1.5m			6.8*	5.2	5.1*	3.3			3.6	2.4	7.5
0	8.6*	8.6*	7.2*	4.9	5.0	3.2			3.8	2.4	7.6
-1.5m	10.1*	9.4	7.0*	4.9	5.0	3.2			4.2	2.7	7.0
-3.5m	8.3*	8.3*	6.0*	4.9					4.4*	3.5	5.7
-4.5m	5.1	5.1							4.0*	4.0*	3.9

The table values refer to **ISO 10567** for excavator equipped with bucket. The indicated load is no more than 87% of hydraulic system lift capacity or 75% of static tipping load. Values marked with an asterisk are limited by the hydraulic system.

Lift capacity 2600 mm dipper stick

Unit: 1000 kg

	Radius of load									
	3.0 m		4.5 m		6.0 m		7.5 m		At max. reac	
	Front	Side	Front	Side	Front	Side	Front	Side	Front	Side

E165 - Triple articulation

Height											
+6.0m			3.8*	3.8*	2.9*	2.9*			2.2*	2.2*	6.2
+4.5m			4.2*	4.2*	3.2*	3.2*			2.1*	2.1*	7.0
+3.0m	7.8*	7.8*	4.9*	4.9*	3.5*	3.1			2.3*	2.3*	7.4
+1.5m	10.7*	8.0	6.3*	4.6	3.9*	3.0	2.7*	2.0	2.5*	2.0	7.6
0	10.5*	7.6	7.2*	4.4	4.5*	2.9			3.0*	2.1	7.3
-1.5m	9.0*	8.0	6.5*	4.4	4.6*	2.8			3.6*	2.3	6.8
-3.0m	6.2*	6.2*	4.6*	4.5					3.1*	3.0	5.8
-4.5m											

E165 - One-piece boom

Height											
+6.0m					3.5*	3.4			2.2*	2.2*	6.6
+4.5m			4.3*	4.3*	3.8*	3.3			2.1*	2.1*	7.3
+3.0m	8.2*	8.2*	5.4*	4.9	4.3*	3.1	3.2*	2.2	2.3*	2.0	7.7
+1.5m	9.6*	8.3	6.5*	4.5	4.6	2.9	3.2*	2.1	2.5*	1.9	7.8
0	10.6*	8.0	7.0	4.3	4.5	2.8	3.2*	2.0	3.0*	2.0	7.6
-1.5m	10.7*	7.9	6.9	4.2	4.4	2.7			3.4	2.1	7.1
-3.0m	9.0*	8.1	6.3	4.2	4.4*	2.8			4.2*	2.7	6.1
-4.5m	6.2*	6.2*	4.2*	4.2*					4.1*	4.1*	4.6

E165LC - Triple articulation

Height											
+6.0m			3.8*	3.8*	2.9*	2.9*			2.2*	2.2*	6.2
+4.5m			4.2*	4.2*	3.2*	3.2*			2.1*	2.1*	7.0
+3.0m	7.8*	7.8*	4.9*	4.9*	3.5*	3.5*			2.3*	2.3*	7.4
+1.5m	10.7*	9.2	6.3*	5.3	3.9*	3.4	2.7*	2.3	2.5*	2.4	7.6
0	10.5*	8.9	7.2*	5.1	4.5*	3.3			3.0*	2.4	7.3
-1.5m	9.0*	9.0*	6.5*	5.0	4.6*	3.3			3.6*	2.7	6.8
-3.0m	6.2*	6.2*	4.6*	4.6*					3.1*	3.1*	5.8
-4.5m											

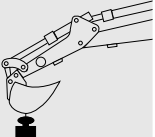
E165LC - One-piece boom

Height											
+6.0m					3.5*	3.5*			2.2*	2.2*	6.6
+4.5m			4.3*	4.3*	3.8*	3.7			2.1*	2.1*	7.3
+3.0m	8.2*	8.2*	5.4*	5.4*	4.3*	5.3	3.2*	2.4	2.3*	2.3*	7.7
+1.5m	9.6*	9.6*	6.5*	5.2	4.8*	3.3	3.2*	2.3	2.5*	2.5*	7.8
0	10.6*	10.6*	7.2*	4.9	5.0*	3.2	3.2*	2.3	3.0*	2.2	7.6
-1.5m	10.7*	9.3	7.1*	4.8	4.9	3.2			3.8	2.4	7.1
-3.0m	9.0*	9.0*	6.3*	4.9	4.4*	3.2			4.2*	3.0	6.1
-4.5m	6.2*	6.2*	4.2*	4.2*					4.1*	4.1*	4.6

The table values refer to ISO 10567 for excavator equipped with bucket. The indicated load is no more than 87% of hydraulic system lift capacity or 75% of static tipping load. Values marked with an asterisk are limited by the hydraulic system.

Lift capacity 3100 mm dipper stick

Unit: 1000 kg

	Radius of load									
	3.0 m		4.5 m		6.0 m		7.5 m		At max. reac	
	Front	Side	Front	Side	Front	Side	Front	Side	Front	Side

E165 - Triple articulation

Height	3.0 m		4.5 m		6.0 m		7.5 m		At max. reac		Reach m
+6.0m			3.5*	3.5*	2.8*	2.8*			1.6*	1.6*	6.8
+4.5m			3.8*	3.8*	2.9*	2.9*	1.8*	1.8*	1.5*	1.5*	7.5
+3.0m	6.5*	6.5*	4.5*	4.5*	3.3*	3.2	2.5*	2.1	1.6*	1.6*	8.0
+1.5m	10.2*	8.1	5.7*	4.6	3.7*	3.0	2.7*	2.0	1.7*	1.7*	8.1
0	10.7*	7.5	7.2	4.3	4.3*	2.9	2.8*	2.0	2.0*	1.8	7.8
-1.5m	9.8*	7.9	6.8*	4.3	4.6	2.8			2.6*	2.2	7.3
-3.0m	7.4*	7.4*	5.3*	4.5	3.5*	2.8			4.0*	3.0	6.4
-4.5m											

E165 - One-piece boom

Height	3.0 m		4.5 m		6.0 m		7.5 m		At max. reac		Reach m
+6.0m					3.2*	3.2*			1.5*	1.5*	7.2
+4.5					3.5*	3.3	2.6*	2.2	1.5*	1.5*	7.8
+3.0m	7.0*	7.0*	4.9*	4.9*	4.0*	3.1	3.3	2.1	1.6*	1.6*	8.2
+1.5m	10.0*	8.5	6.1*	4.6	4.6*	2.9	3.2	2.0	1.7*	1.7	8.4
0	9.3*	7.9	6.9*	4.3	4.4	2.8	3.1	1.9	2.0*	1.7	8.2
-1.5m	10.9*	7.8	6.8	4.1	4.3	2.7	3.1	1.9	2.5*	1.8	7.7
-3.0m	9.6*	7.9	6.5*	4.1	4.3	2.7			3.6	2.2	6.8
-4.5m	7.3*	7.3*	5.0*	4.2					3.8*	3.2	5.4

E165LC - Triple articulation

Height	3.0 m		4.5 m		6.0 m		7.5 m		At max. reac		Reach m
+6.0m			3.5*	3.5*	2.8*	2.8*			1.6*	1.6*	6.8
+4.5m			3.8*	3.8*	2.9*	2.9*	1.8*	1.8*	1.5*	1.5*	7.5
+3.0m	6.5*	6.5*	4.5*	4.5*	3.3*	3.3*	2.5*	2.4	1.6*	1.6*	8.0
+1.5m	10.2*	9.4	5.7*	5.3	3.7*	3.4	2.7*	2.4	1.7*	1.7*	8.1
0	10.7*	8.8	7.3*	5.0	4.3*	3.3	2.8*	2.3	2.0*	2.0*	7.8
-1.5m	9.8*	9.3	6.8*	5.0	4.7*	3.2			2.6*	2.4	7.3
-3.0m	7.4*	7.4*	5.3*	5.2	3.5*	3.2			4.0*	3.1	6.4
-4.5m											

E165LC - One-piece boom

Height	3.0 m		4.5 m		6.0 m		7.5 m		At max. reac		Reach m
+6.0m					3.2*	3.2*			1.5*	1.5*	7.2
+4.5m					3.5*	3.5*	2.6*	2.5	1.5*	1.5*	7.8
+3.0m	7.0*	7.0*	4.9*	4.9*	4.0*	3.6	3.5*	2.4	1.6*	1.6*	8.2
+1.5m	10.0*	9.9	6.1*	5.2	4.6*	3.4	3.6	2.3	1.7*	1.7*	8.4
0	9.3*	9.3	6.9*	4.9	4.9	3.2	3.5	2.2	2.0*	2.0	8.2
-1.5m	10.9*	9.2	7.1*	4.8	4.8	3.1	3.4	2.2	2.5*	2.2	7.7
-3.0m	9.6*	9.3	6.5*	4.7	4.7*	3.1			3.6*	2.6	6.8
-4.5m	7.3*	7.3*	5.0*	4.9					3.8*	3.7	5.4

The table values refer to ISO 10567 for excavator equipped with bucket. The indicated load is no more than 87% of hydraulic system lift capacity or 75% of static tipping load. Values marked with an asterisk are limited by the hydraulic system.

Standard equipment

Auto-idling device
 Batteries, maintenance free
 Cell phone holder with recharge socket
 Centralised boom lubrication
 Cyclone pre-filter
 Double pumps flow
 Engine rpm electronic control
 Foot pedal or lever travel control
 Front seal hydraulic piping and connections
 Fuel transfer electrical pump
 Grease bath swing ring
 HD chains
 Horn
 Hydraulically suspended cab with transparent opening roof and automatic air conditioning system
 Main control valve with antidrift valves

Multi-function electronic instrument panel (E.T.S.)
 M.W.S. (Mechatronic Mode Selector)
 One-piece boom or triple articulation
 Power Boost device
 Radio set
 Seat, heated mechanical suspended
 Shoes:
 Standard version - 500 mm
 LC version - 500 mm
 S.H.S. (Smart Hydraulic System)
 Swing and travel motors with automatic disc type brakes
 Tier-2 emissioned diesel engine
 Tool kit
 Two-speed intermittent operation windshield wiper
 Two travel speeds with Automatic Down Shift device

Optional equipment

Antitheft device
 Air suspension heated operator seat
 Boom anti-drop valves on lift cylinders
 Boom anti-drop valves on dipper stick cylinder
 2200 mm dipper stick
 2600mm dipper stick
 3100mm dipper stick
 Hammer/crusher predisposition
 Hammer piping on booms
 Load handling (including all anti-drop valves and hook)

Multi-purpose, rock and heavy duty buckets with boom/bucket adjustment device
 Northern country equipment
 Piping on booms for supplementary low delivery function
 Shoes:
 STD and LC version - 600 - 700 - 800 - 900mm
 Supplementary cab lights
 Supplementary low delivery hydraulic function predisposition for grass cutter/grapple rotation bucket

Buckets

SAE Capacity	CECE heaped capacity	Width	Weight
0.25 m ³	0.23 m ³	500 mm	375 kg
0.45 m ³	0.41 m ³	750 mm	472 kg
0.54 m ³	0.48 m ³	850 mm	510 kg
0.67 m ³	0.61 m ³	1000 mm	560 kg
0.84 m ³	0.74 m ³	1200 mm	610 kg
0.93 m ³	0.81 m ³	1300 mm	664 kg



At your own dealership

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