VOLVO

Volvo Wheeled Excavators 19.99-21.80 t 175 hp

EW205E

Volvo Construction Equipment

EW205E

Made to match

Access more jobsites thanks to a wide range of Volvo attachments that are purpose-built to work in harmony with Volvo machines.

Here to support you

Volvo Service Agreements offer preventive maintenance, total repairs and a number of uptime services.

The perfect package

Hydraulics in harmony

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

Get set and go

Choose the best work mode for the task at hant – select from I (Idle), F (Fine), G (General), H (Heavy) and P (Power max) plus the new ECO mode.

Operator convenience

Control the machine with just one touch. The joysticks feature two levers that control the machine direction and axle lock.

Built to last

Protect your investment with rust-resistant silicone caulking, waterproof harnesses and connections, and heavy-duty door hinges.

Power up, fuel down

Volvo's efficient D6 Tier 4f engine gives you more power while consuming less fuel for low emission levels.

Access more uptime

Front-right access, guardrails and anti-slip plates provide comfort and easy access to centralized lubrication points, inspection and maintenance where maximize machine uptime.

Comfort counts

Boasting equal measures comfort and productivity, the Volvo cab provides all-around visibility for greater control and convenience.

All angles in view

On-site or on the road, stay comfortable and in control with the side view cameras and cruise control, maximizing visibility and mobility.

Boom and arm you can rely on

Offering a total reach of 9.7 meters, the reinforced boom and arm is an extension of the durably designed machine and undercarriage.

Complete solutions

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

Volvo EW205E in detail

Engine

The latest generation, Volvo engine Tier 4f / Stage IV emissions compliant diesel engine fully meets the demands of the latest, emssissions 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 air-to-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	Volvo	D6J
Max. power at	r/min	2 000
Net (ISO9249/SAEJ1349)	kW	128
	hp	174
Gross (ISO 14396/SAE J1995)	kW	129
	hp	175
Max. torque	Nm	850
at engine speed	r/min	1 350
No. of cylinders		6
Displacement	l	5.7
Bore	mm	98
Stroke	mm	126

Electrical System

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

Voltage	V	24
Batteries	V	2 x 12
Battery capacity	Ah	140
Alternator	V/Ah	28/80
Start motor	V - kW	24-5.5

Undercarriage

Drive train: One big variable axial-piston motor on the two-step Power Shift gearbox gives power to front and rear axles.
Framework: All-welded robust torsion box frame.
Wheels: Alternative single and twin wheels available.
Front axle: Robust excavator axle with automatic or operator controlled front axle oscillation lock.

Oscillation	± °	7
with mudguards	± °	7
Twin wheels	type	10-20 14PR
Tractive force (net)	kN	108.9
Travel speed, on road	km/h	36
Travel speed, off road	km/h	9
Travel speed, creep	km/h	3.5
Min. turning radius	m	7.17

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 12 different adjustments plus a seat belt for the operator's comfort and safety. Refrigerant of the type R134a is used when this machine is equipped with air conditioning. Contains fluorinated greenhouse gas R134a, Global Warming Potential 1.430 t CO_2-eq

Sound Level

Sound level in cab according to ISO 6396		
L_{pA}	dB	72
External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC		
L_{WA}	dB	100

Swing system

Max. slew speed	r/min	11.8
Max. slew torque	kNm	83

Hydraulic System

The new electro-hydraulic system and new MCV (main control valve) use intelligent technology to control on-demand flow for high productivity, high-digging capacity 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 fasater 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.
The following working modes are included in the system:
Parking mode (P): Parking position for optimal safety.
Travel mode (T) : Engine speed is controlled by travel pedal stroke and mode selection switch for low fuel consumption and noise. Work equipment are not able to move at this mode for optimal safety.
Working mode (W): Full working flow with adjustable engine rpm for normal working and best speed utilisation.
Creeping mode (C): Additional working mode for fixed lower travel speed.

Main pump: 2 x Variable displacement axial piston pumps		
Max. flow	l/min	2 x 230
Pilot pump: Gear pump		
Max. flow	l/min	1 x 20
Brake + steering pump: Low noise gear pump		
Max. flow	l/min	1x20.4+1x40.6
Relief valve setting pressure		
Implement	MPa	32.4 / 34.3
Travel system	MPa	34.3
Slew system	MPa	27.9
Pilot system	MPa	3.9

Hydraulic Cylinders

Boom		2
Bore x Stroke	ø x mm	120 x 1 235
Arm		1
Bore x Stroke	ø x mm	135 x 1 540
Bucket		1
Bore x Stroke	ø x mm	120 x 1 065
Dozer blade		1
Bore x Stroke	ø x mm	115 x 273
Outrigger		2
Bore x Stroke	ø x mm	130 x 395

Brake system

Service brakes: servo-hydraulically manoeuvred self-adjusting wet multidiscs with two separate brake circuits.
Parking brake: negative wet disc in gear housing, spring applied and pressure released.
Digging brake: service brake with mechanical lock system.
Security system: The 2-circuit travel brakes are supplied with two accumulators in the event of failure in the service brake system.

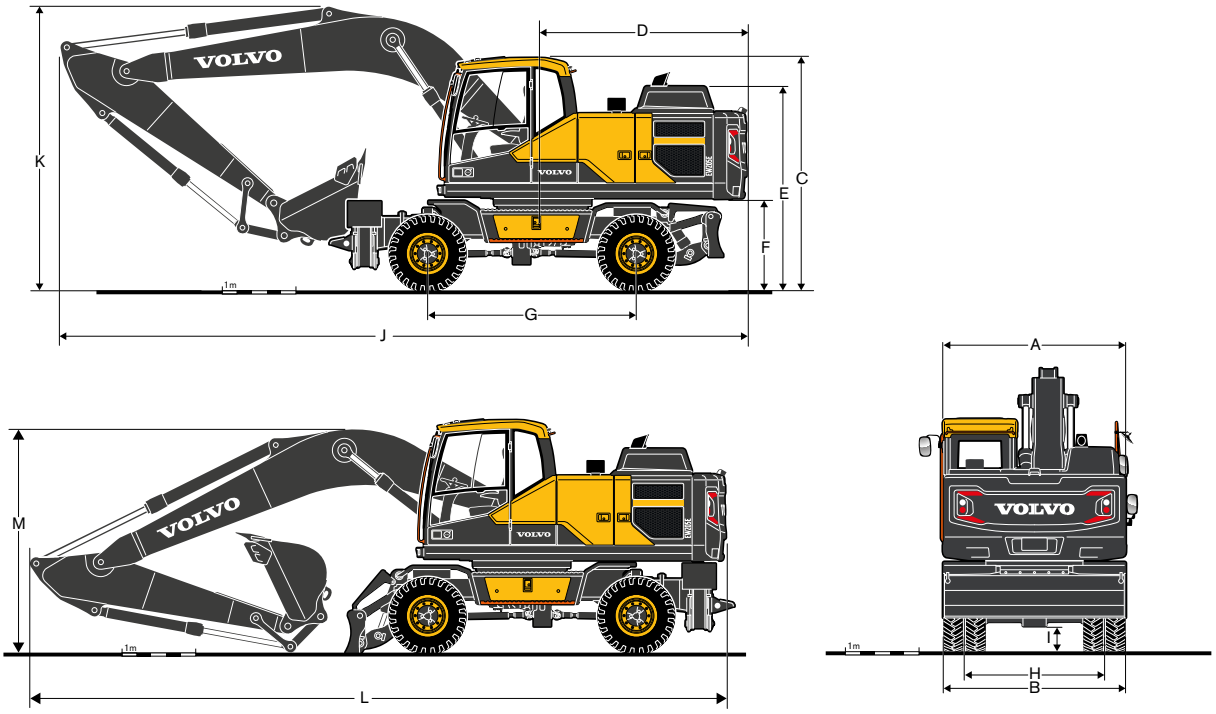
Total Machine Weights

Machine with 5.7m boom, 2.7m arm, 683 kg / 860 l bucket (V4), with 3 050kg counterweight		
With dozer blade and Outrigger	kg	19 990
Machine with 5.7m boom, 2.7m arm, 683 kg / 860 l bucket (V4), with 3 400kg counterweight (option)		
With dozer blade and Outrigger	kg	21 310

Service Refill

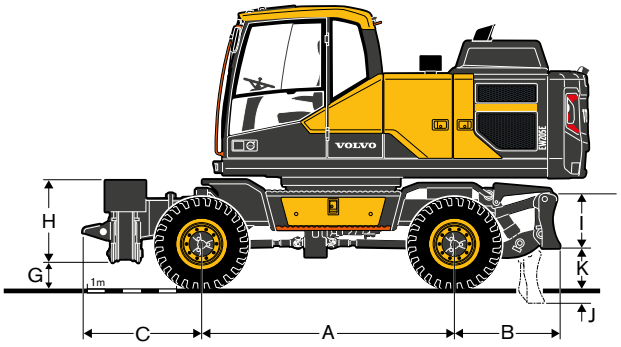
Fuel tank	l	300
DEF/AdBlue® tank	l	25
Hydraulic system, total	l	335
Hydraulic tank	l	148
Engine oil	l	25
Engine coolant	l	30.4
Swing reduction unit	l	7
Transmission	l	2.5
Axle differential:		
Front axle	l	11
Rear axle	l	11
Final drive	l	4 x 2.5

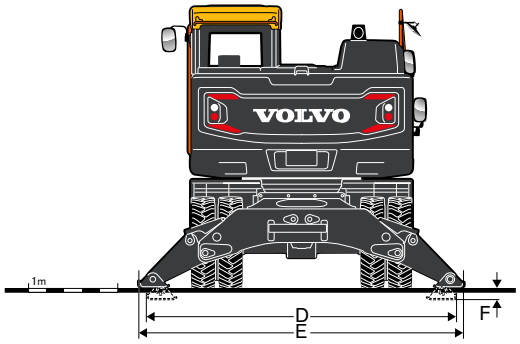
Specifications



MACHINE DIMENSIONS		
Description	**Unit**	**EW205E**
Boom	**m**	**5.65**
Arm	**m**	**2.7**
A. Overall width of upper structure	mm	2 500
B. Overall width	mm	2 500
C. Overall height of cab	mm	3 180
D. Tail swing radius	mm	2 800
E. Overall height of engine hood	mm	2 790
F. Counterweight clearance	mm	1 255
G. Wheel base	mm	2 850
H. Tread width	mm	1 914
I. Min. ground clearance	mm	337
J. Overall length (travel position)	mm	9 390
K. Overall height of boom (travel position)	mm	3 960
L. Overall length (transportation position)	mm	9 510
M. Overall height of boom (transportation position)	mm	3 185

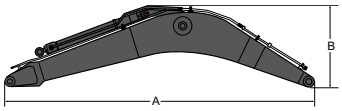
Specifications

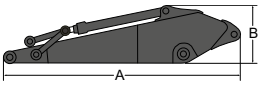




OUTRIGGER AND DOZER BLADE

Description			Unit	
Front Dozer & Rear Outrigger	Wheel base	A	mm	2 850
	Dozer to wheel	B	mm	1 185
	Outrigger to wheel	C	mm	1 340
Outrigger	Width digging	D	mm	3 498
	Width	E	mm	3 662
	Digging depth	F	mm	125
	Clearance	G	mm	297
	height	H	mm	915
	Weight		kg	1 166
Dozer Blade	height	I	mm	630
	Digging depth	J	mm	161
	Lifting height	K	mm	460
	Width		mm	2 500
	Weight		kg	819

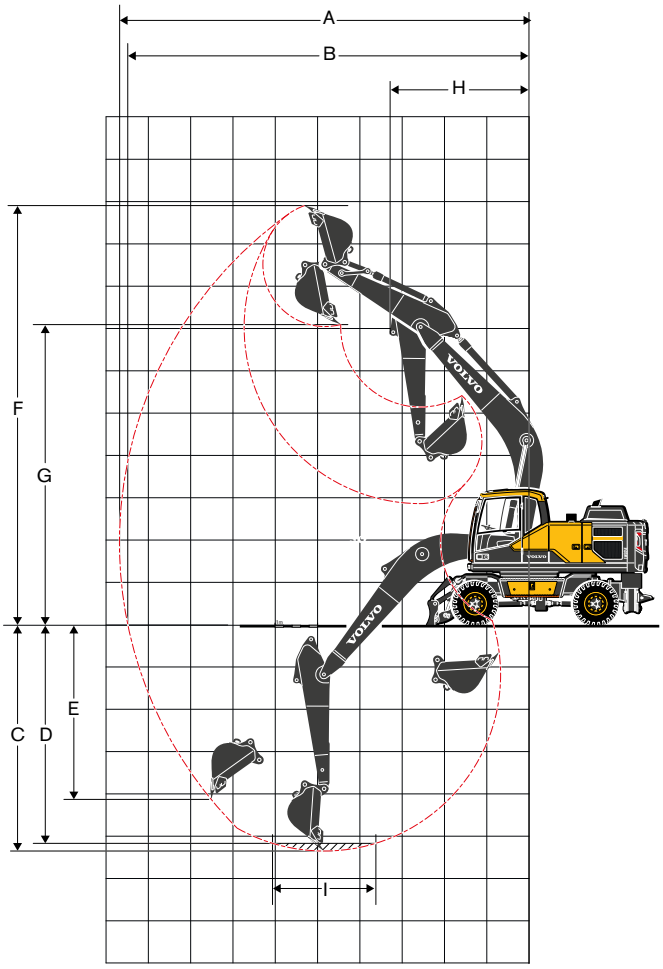




BOOM AND ARM

Description	Unit	Boom	Arm(LD)	Arm(GP)
	m	**5.65**	**2.7**	**2.7**
A. Length	mm	5 870	3 710	3 710
B. Height	mm	1 650	870	870
Width	mm	670	440	440
Weight	kg	1 995	1 040	1 080

Boom: Includes cylinder, piping and pin, excludes boom cyl. Pin
Arm: Includes cylinder, linkage and pin



WORKING RANGES WITH DIRECT FIT BUCKET				
Description			**Unit**	**EW205E**
Boom			**m**	**5.65**
Arm			**m**	**2.7**
A. Max. digging reach			mm	9 685
B. Max. digging reach on ground			mm	9 490
C. Max. digging depth		Along	mm	5 565
		Across	mm	6 060
D. Max.digging depth (I=2440 mm level)		Along	mm	5 380
		Across	mm	5 875
E. Max. vertical wall digging depth			mm	4 125
F. Max. cutting height			mm	9 895
G. Max. dumping height			mm	7 085
H. Min. front swing radius			mm	3 310
DIGGING FORCES WITH DIRECT FIT BUCKET				
Bucket radius			mm	1 470
Breakout force (bucket)	Normal	SAE	kN	122
	Power boost	SAE	kN	130
	Normal	ISO	kN	136
	Power boost	ISO	kN	144
Tearout force (arm)	Normal	SAE	kN	100
	Power boost	SAE	kN	106
	Normal	ISO	kN	102
	Power boost	ISO	kN	109
Rotation angle, bucket			deg	175

Specifications

BUCKET SELECTION GUIDE

Bucket type		Capacity	Cutting width	Weight	Teeth	Front outrigger and rear dozer blade	
						5.65 m Boom, Counterweight 3 050 kg	5.65m Boom, Counterweight 3 400 kg
		L	mm	kg	EA	Arm LD 2.7 m	Arm GP 2.7 m
Direct fit Buckets (V4) without quick coupler	General Purpose	860	1 235	682	5	B	B
		1 000	1 235	736	5	C	C
	Light Utility	1 100	1 210	863	5	B	C

Please consult with your Volvo dealer for the proper match of buckets and attachments to suit the application.
The recommendations are given as a guide only, based on typical operation conditions.
Bucket capacity based on ISO 7451, heaped material with a 1:1 angle of repose.

Maximum materal density		
A	1 200~1 300 kg/m³	Coal, Caliche, Shale
B	1 400~1 600 kg/m³	Wet earth and clay, Limestone, Sandstone
C	1 700~1 800 kg/m³	Granite, Wet sand, Well blasted rock
D	1 900 kg/m³ ~	Wet mud, Iron ore

LIFTING CAPACITY EW205E

At the arm end, without bucket and quick fit. For lifting capacity including bucket/quick fit, simply subtract actual weight of those parts from the following values. With heavy couterweight. Unit: 1 000kg
Notes: 1. Machine in “Fine Mode-F” (Power Boost) for lifting capacities. 2. The above values are in compliance with ISO standard 10567. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load, with the machine on firm, level ground. 3. Load capacities marked with an asterisk (*) are limited by machine’s hydraulic lifting capacity rather than tipping load.

	Lifting point	Reach from machine centre (u = support up/d = support down)																				
		3.0 m				4.5 m				6.0 m				7.5 m				Max.				
		Across UC		Along UC		Across UC		Along UC		Across UC		Along UC		Across UC		Along UC		Across UC		Along UC		Max.
	m	u	d	u	d	u	d	u	d	u	d	u	d	u	d	u	d	u	d	u	d	m
Boom 5.65m GP Arm 2.7m LD CWT 3050kg Front Outrigger Rear Dozer blade	7.5	-	-	-	-	-	-	-	-	*4.3	*4.3	4.1	*4.3	-	-	-	-	*4.2	*4.2	4.1	*4.2	6.0
	6	-	-	-	-	-	-	-	-	*4.9	*4.9	4.2	*4.9	-	-	-	-	*3.9	*3.9	3.1	*3.9	7.1
	4.5	-	-	-	-	*6.4	*6.4	6.2	*6.4	*5.4	*5.4	4.0	5.3	3.9	*5.0	2.8	3.7	3.6	*3.8	2.6	3.4	7.8
	3	-	-	-	-	*8.0	*8.0	5.7	7.8	5.3	*6.1	3.8	5.0	3.8	*5.3	2.7	3.6	3.3	*3.9	2.3	3.1	8.2
	1.5	-	-	-	-	7.8	*9.3	5.3	7.3	5.1	*6.8	3.6	4.8	3.6	*5.6	2.6	3.5	3.2	*4.2	2.3	3.0	8.2
	0	*6.2	*6.2	*6.2	*6.2	7.5	*9.9	5.0	7.0	4.9	*7.3	3.4	4.6	3.6	*5.7	2.5	3.4	3.3	*4.7	2.3	3.1	8.0
	-1.5	*11.6	*11.6	9.4	*11.6	7.5	*9.7	5.0	7.0	4.8	*7.2	3.4	4.6	-	-	-	-	3.6	*5.5	2.5	3.4	7.5
	-3	*12,1	*12.7	9.6	*12.1	7.6	*8.8	5.1	7.1	4.9	*6.4	3.4	4.6	-	-	-	-	4.4	*5.6	3.1	4.1	6.5
	-4.5	-	-	-	-	*6.3	*6.3	5.3	*6.3	-	-	-	-	-	-	-	-	-	-	-	-	5.0
Boom 5.65m GP Arm 2.7m LD CWT 3400kg Front Dozer blade Rear Outrigger	7.5	-	-	-	-	-	-	-	-	*4.3	*4.3	*4.3	*4.3	-	-	-	-	*4.2	*4.2	*4.2	*4.2	6.0
	6	-	-	-	-	-	-	-	-	*4.9	*4.9	4.4	*4.9	-	-	-	-	*3.9	*3.9	3.2	*3.9	7.1
	4.5	-	-	-	-	*6.4	*6.4	*6.4	*6.4	*5.4	*5.4	4.2	*5.4	4.0	*5.0	2.9	3.9	3.8	*3.8	2.7	3.6	7.8
	3	-	-	-	-	*8.0	*8.0	6.0	*8.0	5.5	*6.1	4.0	5.3	3.9	*5.3	2.8	3.8	3.4	*3.9	2.5	3.3	8.2
	1.5	-	-	-	-	8.2	*9.3	5.5	7.7	5.3	*6.8	3.8	5.1	3.8	*5.6	2.7	3.7	3.3	*4.2	2.4	3.2	8.2
	0	*6.2	*6.2	*6.2	*6.2	7.9	*9.9	5.3	7.4	5.1	*7.3	3.6	4.9	3.7	*5.7	2.7	3.6	3.4	*4.7	2.4	3.3	8.0
	-1.5	*11.6	*11.6	9.9	*11.6	7.8	*9.7	5.3	7.4	5.1	*7.2	3.5	4.8	-	-	-	-	3.8	*5.5	2.7	3.6	7.5
	-3	*12,1	*12.7	10.1	*12.1	7.9	*8.8	5.3	7.4	5.1	*6.4	3.6	4.9	-	-	-	-	4.6	*5.6	3.2	4.4	6.5
	-4.5	-	-	-	-	*6.3	*6.3	5.6	*6.3	-	-	-	-	-	-	-	-	-	-	-	-	5.0
Boom 5.65m GP Arm 2.7m GP CWT 3400kg Front Dozer blade Rear Outrigger	7.5	-	-	-	-	-	-	-	-	*4.3	*4.3	*4.3	*4.3	-	-	-	-	*4.2	*4.2	*4.2	*4.2	6.0
	6	-	-	-	-	-	-	-	-	*4.9	*4.9	4.3	*4.9	-	-	-	-	*3.9	*3.9	3.2	*3.9	7.1
	4.5	-	-	-	-	*6.3	*6.3	*6.3	*6.3	*5.3	*5.4	4.2	*5.4	4.0	*5.0	2.9	3.8	3.7	*3.8	2.7	3.6	7.8
	3	-	-	-	-	*7.9	*8.0	6.0	*7.9	5.5	*6.9	3.9	5.2	3.9	*5.2	2.8	3.7	3.4	*3.9	2.5	3.3	8.2
	1.5	-	-	-	-	8.1	*9.3	5.5	7.6	5.3	*6.8	3.7	5.0	3.8	*5.5	2.7	3.6	3.3	*4.2	2.4	3.2	8.2
	0	*6.2	*6.2	*6.2	*6.2	7.9	*9.9	5.3	7.3	5.1	*7.2	3.6	4.8	3.7	*5.7	2.6	3.5	3.4	*4.7	2.4	3.2	8.0
	-1.5	*11.6	*11.6	9.8	*11.6	7.8	*9.7	5.2	7.3	5.0	*7.2	3.5	4.8	-	-	-	-	3.7	*5.5	2.6	3.6	7.5
	-3	*12.1	*12.1	10.0	*12.1	7.9	*8.7	5.3	7.4	5.1	*6.4	3.6	4.8	-	-	-	-	4.5	*5.6	3.2	4.3	6.5
	-4.5	-	-	-	-	*6.3	*6.3	5.6	*6.3	-	-	-	-	-	-	-	-	-	-	-	-	5.0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Equipment

STANDARD EQUIPMENT
Engine
Turbocharged, 4 stroke diesel engine with water cooling, direct injection and charged air cooler that meets Tier 4f / Stage IV requirements
Standard cooling system by fan clutch (40 deg. C)
Electric engine shut-off
Air filter with indicator
Air intake heater
Cyclone pre-cleaner
Fuel filter and water separator
Alternator, 80 A
Electric / Electronic control system
Engine speed sensing power control
Machine status indication
Automatic idling system
One-touch power boost
Safety stop/start function
Adjustable LCD color monitor
Master electrical disconnect switch
Engine restart prevention circuit
Emergency engine stop
Travel alarm
Rear view camera
High-capacity halogen lamps:
- Frame-mounted 2
- Boom-mounted 1
Battery, 2 x 12 V / 140 Ah
Start motor, 24 V / 5.5 kW
Superstructure
Service walkway with anti-slip grating
Access way with handrail
Centralized lubricating point for swing bearing
Tool storage area
Counterweight
Undercover
Undercarriage
Lower frame with Front outrigger and rear dozer blade
Mudguard
2-speed power transmission plus creep
Oscillating front axle
2-circuit travel brakes
Maintenance-free propeller shafts
Tire 10.00-20-14PR

STANDARD EQUIPMENT
Hydraulic System
Automatic 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
Hydraulic piping:
- Hammer, 1 pump flow
- Slope/Rotator
Boom and arm holding valves
Multi-stage filtering system
Cylinder cushioning
Cylinder contamination seals
Hydraulic oil, longlife oil 46
Cab and interior
Rubber mounts with spring
Heater and air-conditioner, automatic
Adjustable operator seat and joystick control console
Adjustable steering wheel
4 switch Control joystick with traveling fuction
Flexible antenna
Radio with MP3/AUX
Control lock out lever
Cab, all-weather sound suppressed, includes:
- Cup holders
- Door locks
- Tinted and safety glass
- Floor mat
- Horn
- Pull-up type front window
- Removable lower windshield
- Seat belt
- Windshield wiper with intermittent feature
Sun Screen, front/roof/rear
Combination Key
Digging Equipment
Boom: 5.65m
LD Arm: 2.7m with strip
LD Linkage
Centralized lubrication point
Service
Tool kit, full scale

OPTIONAL EQUIPMENT
Engine
Oil bath pre-cleaner
Water separator with heater
Auto engine shutdown
Fuel filler pump: 35 lpm with auto stop
Electric
Caretrack
Extra work lights:
- Boom-mounted 1
- Cab-mounted 3 (front 2, rear 1)
- Counterweight-mounted 1
Anti-theft system
Side view camera_KR wheeled
Flashing beacon, LED
Cleaning air gun
Microphone
Superstructure
Heavy Counterweight
Hydraulic System
Boom hose rupture valve with overload warning device
Arm hose rupture valve
Hydraulic piping:
- Hammer & shear, 1 and 2 pump flow
- Slope/Rotator
- Quick coupler
Volvo hydraulic quick coupler S1, Dromone
Hydraulic oil, ISO VG 32, 68
Hydraulic oil, longlife oil 32, 46, 68
Cab and interior
ROPS (ISO12117-2) certified cab with openable roof hatch
Mechanical suspension seat without heater and x-isolator
Mechanical suspension seat with heater without x-isolator
Air suspension seat with heater and x-isolator
Cab-mounted falling object guard (FOG) hinged type
Cab-mounted falling object protective structure (FOPS)
Smoker kit (ashtray and lighter)
Safety net for front window
Front rain shield
Sun shield, roof hatch (steel)
Radio with MP3/AUX/Bluetooth
Universal Key
Digging Equipment
GP Arm: 2.7m with strip
GP Linkage
Service
Tool kit, daily maintenance
Spare parts kit

VOLVO