



Volvo Construction Equipment

EW210D MH

VOLVO WHEELED EXCAVATOR 24 t 129kW





The multi-purpose medium material handler

Throughout the years, the Volvo Wheeled Excavator has proven to be a multi-purpose machine for a range of different applications. The EW210D is now launched for Medium Material Handling.

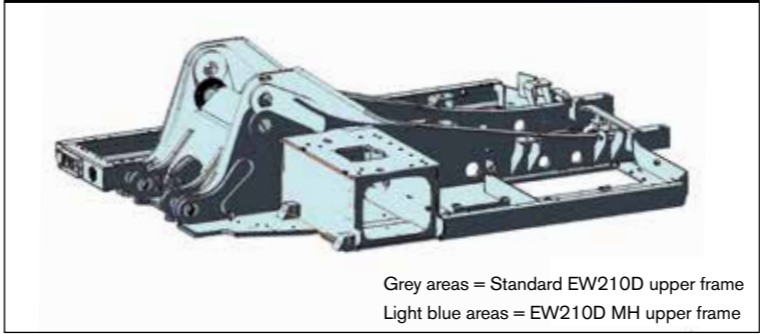
The EW210D MH is suitable for handling waste material blocks, loading and unloading trucks, containers and barges, loading shredders and compactors, but also other applications such as sorting out waste in different fractions or loading sugar beets. For these applications Volvo Construction Equipment has developed an optimised boom foot kinematic on a reinforced machine with hydraulic cab elevation. The machine is equipped with straight material handling boom and two alternative arms, gooseneck arm for loading and unloading and grab arm for sorting operations.

Fuel efficiency

Excellent fuel efficiency from Volvo's D6 Stage IIIB/Tier 4 Interim engine, enhanced hydraulic system and well matched Volvo components. More power with ultimate efficiency.

Diesel Particulate Filter (DPF)

The standard fitted active type DPF includes a Diesel Oxidation Catalyst function and regeneration burner. The system temporarily holds soot and exhaust fumes and incinerates them, lowering emissions without reducing performance.



Grey areas = Standard EW210D upper frame
Light blue areas = EW210D MH upper frame



Engine

The Volvo diesel engine uses Volvo Advanced Combustion Technology (V-ACT) and is compliant with the EU Stage IIIB, delivers lower emissions and maintain superior performance and fuel efficiency.

Upper frame

The upper frame is all-welded reinforced for material handling with optimised boom foot kinematic.

Undercarriage

The undercarriage is an all-welded robust torsion box frame reinforced for material handling. The drive train has a variable axial-piston motor with two-step power shift gearbox supplies power to front and rear axles, both with hub reductions. The front axle has a robust excavator axle with front axle oscillation lock.

Cab

Volvo Care Cab with 2.5m hydraulic cab elevation has large and roomy interior, more leg room and foot space and excellent all-round visibility. The pressurized and filtered cab air is supplied by a 14 vent climate control providing for fast defrosting and high cooling and heating performance. Viscous / spring mounted suspension cushions protect the operator from vibrations.

Specifications

Engine

Volvo Construction Equipment is ready to comply with the tough new EU Stage IIIB and US (EPA) Tier 4 interim legislation for off-road vehicles with the introduction of a cascade of innovations in its new generation engines with Volvo Advanced combustion technology (V-ACT).

Volvo machines are equipped with Volvo designed and manufactured inline turbo charged diesel engine with high pressure unit injector system. The engine features an externally cooled exhaust gas re-circulation (E-EGR) and a Diesel Particulate Filter.

Engine	VOLVO	D6H
Power output at	rpm	2 000
Gross (ISO 14396)	kW	129
	hp	173
Net (ISO 9249, DIN 6271)	kW	126
	hp	169
Max. torque at 1 500 rpm	Nm	758
Number 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.

Voltage	V	24
Battery	V	2 x 12
Battery capacity	Ah	2 x 140
Alternator	V / A	28 / 120
Alternator rating	W	3 360

Cab

New-design Volvo Care Cab with operator protective structure, large and roomy interior, more leg room and foot space. One way travel pedal with rocker switch control (F-N-R) on the right joystick. One-touch release for digging brake pedal. Audio system with remote control. 3 cup holders, 3 outlets, independently adjustable joystick consoles.

Excellent all-round visibility provided by maximized cab class, transparent roof hatch, 2-piece sliding door window and longstroke, easy to adjust and narrow steering column. The liftable front windshield can easily be stored in the inside roof space and clipped in position. The removable lower front glass can be stored in the side door pocket. Interior lighting consists of one reading light and one light with timer.

The pressurized and filtered cab air is supplied by a 14-vent climatecontrol providing fast defrosting and high cooling and heating performance.

Viscous / spring mounted suspension cushions protect the operator from vibrations. Deluxe air-suspension seat with adjustable seat suspension, height, tilt, recline and forward-backward settings. (option).

Adjustable, easy to read 6.4" LCD color monitor provides real time information of machine functions and important diagnostic information and is switchable to rear view camera monitor.

Sound level

In cab, acc. to ISO 6396	LpA dB(A)	70
External, acc. to ISO 6395	LwA dB(A)	103

(Directive 2000/14/EC)

Undercarriage

Drive train: A variable axle piston motor in combination with a power shift gearbox supplies 3 speeds. The gearbox distributes the energy via propeller shafts to the 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.

Oscillating	°	± 9
with mudguards	°	± 7
Twin wheels		10.00-20
Maximum tractive force (net)	kN	121

Travel speed

On road	km/h	20.0/25.0/30.0
Off road	km/h	5.0/6.4/7.4
Creep	km/h	3.2
Minimum turning radius	m	8.1

Brakes

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.

Service refill capacities

Fuel tank	L	335
Hydraulic system, total	L	330
Hydraulic tank	L	165
Engine oil	L	25
Engine coolant	L	33
Transmission	L	2.5

Axle differential:

Front axle	L	9.5
Rear axle	L	14.5
Final drive, wet disc type	L	4 x 2.5

Hydraulic system

Closed-centre load sensing hydraulic system with pressure compensated valves. Load independence of movements. Flow sharing feature, combined with a high flow electronically controlled pump (power regulation). The system gives superior manoeuvrability and fast movements, for optimal working result and economy.

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 for low fuel consumption and noise.
- Working mode (W): Full working flow with adjustable engine rpm for normal working and best speed utilisation.
- Customer mode (C): Operator can set proper oil flow in accordance with job conditions.
- Power Boost: All digging and lifting forces are increased.

Hydraulic pumps:

Maximum flows:

Main pump (type low noise axial piston pump)	l/min	420
Brake + steering pump (type low noise gear pump)	l/min	36.1
Servo pump (type low noise gear pump)	l/min	15.2

Maximum pressure:

Implements	MPa	34/37.5
Travel system	MPa	37.5
Pilot System	MPa	3.5

Slew system

The superstructure is slewed by the means of an axial motor with reduction gear box.

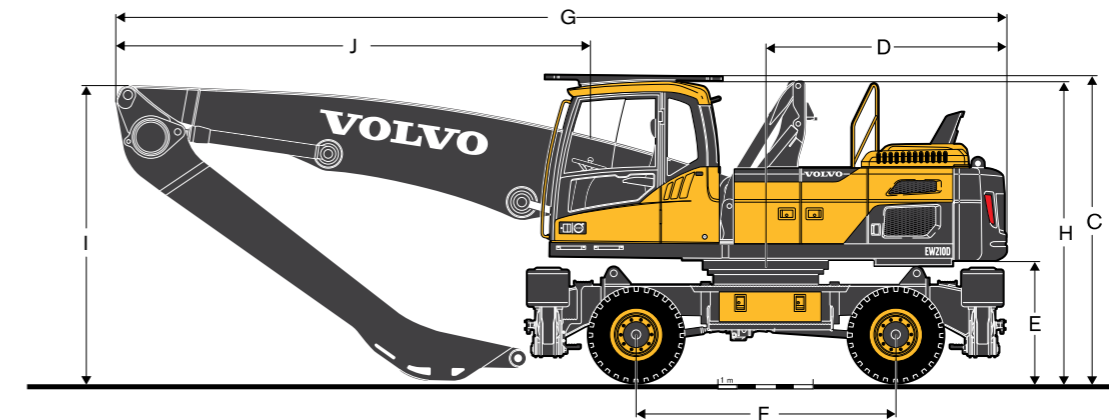
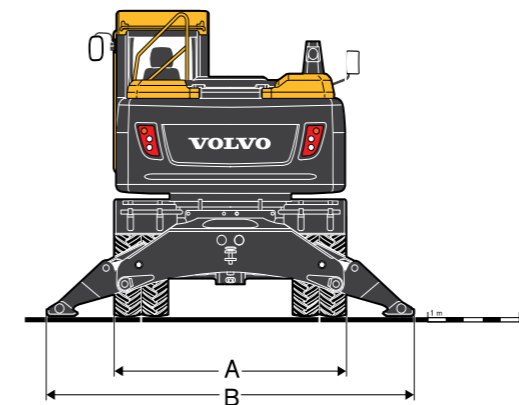
Automatic slew holding brake and anti-rebound valve are standard.

Maximum slew speed	rpm	9.7
Maximum slew torque	kNm	77.5

Specifications

Total machine weights

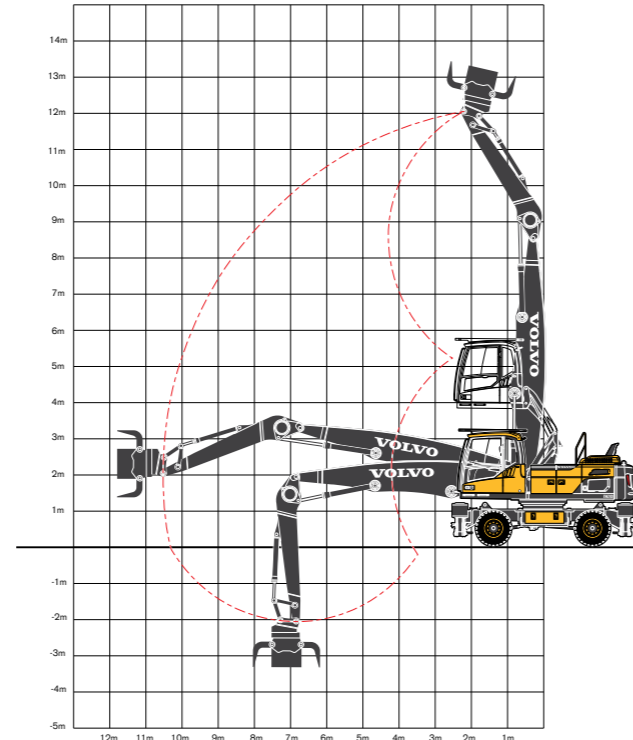
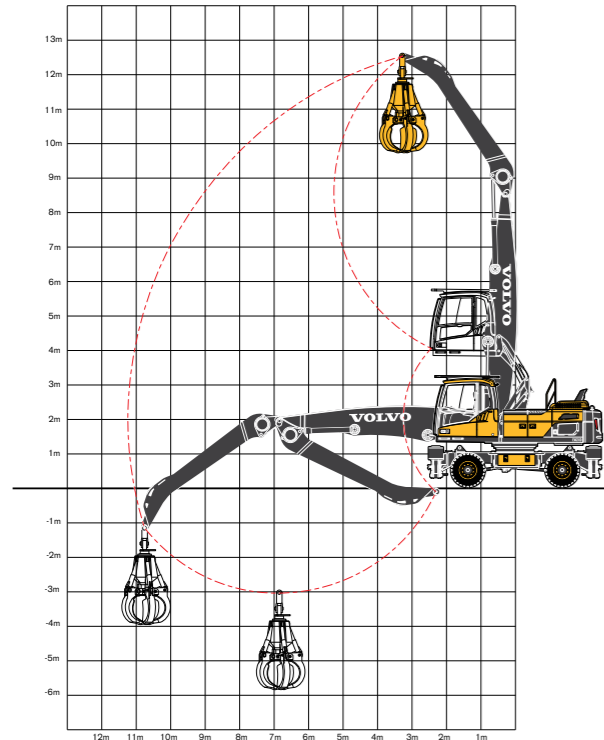
- Machine with 6.5m material handling boom and 5.0 m goose neck arm and 1 460kg/600l Polyp Grab including outriggers front and rear: 23 300kg
- Machine with 6,5m material handling boom and 4.0 m sorting arm and 1 120kg/460l Sorting Grab including outriggers front and rear: 23 200kg



Description	Unit	Straight boom 6.5 m		
		Arm for polyp grab*	Arm for sorting grab**	
A	Overall width	mm	2750	2750
B	Outrigger width (front or rear)	mm	4000	4000
C	Free height under elevated cab on outriggers	mm	3910	3910
		mm	2650	2650
D	Tail slew radius	mm	1280	1280
E	Counterweight clearance	mm	2750	2750
F	Wheel base	mm	9430	9430
G	Overall length	mm	3180	3180
H	Overall height	mm	3270	3450
I	Overall height of boom	mm	5030	5030
J	Overall length of boom	mm		

* Arm for polyp grab, w/o grab ** with quick fit, w/o grab

Equipment



Max. recommended sizes for direct fit grab
 Poly grab 600/1460 l/kg
 Sorting grab 460/1120 l/kg

Gooseneck arm														
Height (m)	3.0	4.5	6.0	7.5	9.0	10.5	Max range							
Lifting hook (m)														
	12.0	10.5	9.0	7.5	6.0	4.5	3.0	1.5	0	-1.5	-3	Max	Max	Max
12.0	0.0	0.0	5.8*	5.8*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6*	5.6*	4.7
10.5	0.0	0.0	0.0	0.0	5.8*	5.8*	0.0	0.0	0.0	0.0	0.0	4.5*	4.5*	7.2
9.0	0.0	0.0	0.0	0.0	6.4*	6.4*	5.6*	5.6*	0.0	0.0	0.0	4.1*	4.1*	8.7
7.5	0.0	0.0	0.0	0.0	6.4*	6.4*	5.7*	5.7*	4.7	5.1*	0.0	4.1*	4.1*	9.7
6.0	0.0	0.0	0.0	0.0	6.8*	6.8*	5.8*	5.8*	4.6	5.2*	3.6	3.8*	3.6	10.5
4.5	0.0	0.0	9.1*	9.1*	7.3*	7.3*	6.0	6.1*	4.5	5.2*	3.5	4.5*	3.3	10.9
3.0	0.0	0.0	10.5*	10.5*	7.9*	7.9*	5.8	6.4*	4.4	5.3*	3.5	4.5*	3.1	11.2
1.5	0.0	0.0	11.4*	11.4*	7.8	8.3*	5.6	6.5*	4.3	5.3*	3.4	4.4*	3.1	11.2
0	2.8*	2.8*	9*	9*	7.5	8.3*	5.4	6.4*	4.2	5.2*	3.3	4*	3.2	11.0
-1.5	0.0	0.0	7.8*	7.8*	7.3	7.6*	5.3	6*	4.1	4.7*	3.3	3.4*	3.3	10.5
-3	0.0	0.0	0.0	0.0	0.0	0.0	5*	5*	0.0	0.0	0.0	4.8*	4.8*	7.7

Sorting arm														
Height (m)	4.5	6.0	7.5	9.0	10.5	Max range								
Lifting hook (m)														
	10.5	9.0	7.5	6.0	4.5	3.0	1.5	0	-1.5	Max	Max	Max	Max	Max
10.5	8.2*	8.2*	6.1*	6.1*	0.0	0.0	0.0	0.0	0.0	0.0	6.1*	6.1*	6.0	
9.0	8.2*	8.2*	6.8*	6.8*	5.8*	5.8*	5.6*	0.0	0.0	0.0	5.5*	5.5*	7.7	
7.5	8.3*	8.3*	6.8*	6.8*	5.9*	5.9*	0.0	0.0	0.0	0.0	4.4*	5*	8.9	
6.0	8.9*	8.9*	7.1*	7.1*	5.8	6*	4.3	5.1*	0.0	0.0	3.8	4.8*	9.7	
4.5	10*	10*	7.6*	7.6*	5.7	6.2*	4.2	5.2*	0.0	0.0	3.4	4.4*	10.2	
3.0	11.1*	11.1*	7.8	8*	5.5	6.3*	4.1	5.2*	3.2	4.1*	3.2	4.1*	10.5	
1.5	7.3*	7.3*	7.4	8.2*	5.3	6.3*	4.0	5*	3.2	3.7*	3.2	3.7*	10.5	
0	5.8*	5.8*	7.2	7.7*	5.2	6*	3.9	4.6*	0.0	0.0	3.3	3.4*	10.3	
-1.5	0.0	0.0	6.7*	6.7*	5.1	5.2*	0.0	0.0	0.0	0.0	3.9*	3.9*	8.9	

Notes: Unit: 1000 kg. Working pressure: 34MPa. Heavy counterweight.

1. Load in the arm end, without tool and with outrigger down. 2. The above values are in compliance with ISO standard 10 567:2007. 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.

Standard equipment

- Solid rubber tires
 - eliminate the risk of damage
 - increase the performance
- Air inlet turbo pre-cleaner
 - additional protection
- Micro-mesh and sealing for engine compartment
 - reduce intake of dust
- Reversible fan
 - more up-time
- Dust net for radiator and coolers
 - extends cleaning periods

- Hydraulic elevated cab
 - provides a common view
- Impact resistant glass in front windshield
 - safety glass to protect operator

Optional equipment

- Boom float hydraulics
 - limits damage to the containers
- Boom height limitation
 - simplifies working under ceiling
- Automatic lubrication of bearings
 - increases up-time
- LED working lights on cab, boom and arm
 - safe working during dark hours
- Safety net, front window



EW210D

MATERIAL HANDLER

VOLVO

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