

**V O L V O**

Volvo FMX 500 8x4 Off-road Dump Truck

# **Push the limits of productivity**



Volvo Trucks. Driving Progress

# VOLVO FMX 500 8X4

## Safety always remains the prime value pillar

Volvo is synonymous with safety. The slimmer A-pillar, larger windscreen and lower door lines have improved direct visibility by 10%. The truck is now provided with reverse camera with the view available on the digital instrument panel. Additional camera under the passenger side mirror arm eliminates all the blind spots. There is provision to install 4 additional cameras.

Tinted windshield helps reduce glare and improved rear view mirrors gives you the best views. With improved visibility driver is more confident and chances of accidents are minimized. Power windows and central door locking secures the truck. Volvo cabs have been subjected to the toughest tests including the Swedish crash test.

A body builder module ECU prevents the truck from exceeding 5 kmph speed when the dump body is in raised position, thus preventing accidents at the dump yard.

Electronic braking system and Electronic stability control give you all the more confidence to tame the roughest of the roads. Downhill cruise control maintains a set speed when the loaded truck is going down the slopes using auxiliary brakes VEB+ (Volvo Engine Brake). This also reduce brake wear and improve service life.

Volvo Dynamic Steering (VDS) ensures that the truck is stable even while carrying heavy payloads. Stability Assist is a driver support function on low friction surfaces. It helps the driver to keep control of the vehicle by a guiding steering torque when the truck starts to skid.

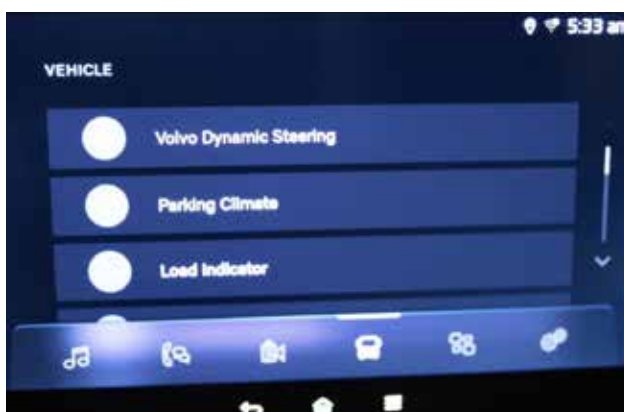
PSS-Dual emergency steering helps to steer the vehicle to safety in case of primary hydraulic circuit failure. A warning is flashed in the driver display.



Camera view



Passenger Corner camera



Secondary information display



Rear view camera





## Most comfortable cab

Drivers are the most important part of the trucking industry and their comfort is directly proportional to the productivity. The new FMX 500 cab has been designed keeping this in mind. With 800 ltr more cabin space, climate control with enhanced thermal insulation, 2dB quieter cab, and excellent internal and external storage space, soft closure of doors, and better vibration arresting drivers are sure to guarantee few extra trips per shift.



# Convenience redefined

The new Volvo FMX 500 has the state of the art I-Shift 12 speed automated manual transmission which chooses the best gear in the interest of power and fuel economy. The ergonomically designed new gear control lever fits snugly in palm. Switch between drive modes like economy, standard, performance and off-road with a push of a button. With I-Shift your driver has one less activity to focus on.

With the upgraded gearbox, AMT – G, gear shifting speed improves by 30% to get a smoother shift without loss of power and torque between shifts; the software updates gives Improved torque accuracy and engine speed control. The gearbox also has better reliability and repair ability.

Add to this cruise control to maintain speed and downhill cruise control starting from 4 kmph, to regulate speed while going down the slopes using auxiliary brakes VEB+ (Volvo Engine Brake), so as to reduce brake wear.

Auto Hold function is an extension of Electric Parking Brake and Hill Start Aid – once brought to a standstill, the truck holds the brake until the driver releases it by pressing the accelerator pedal, thus offering more convenience to the driver along with extra safety.



Pre-trip check diagnosis



Auto hold

Change Direction enables the driver to select reverse gear while driving forward at lower vehicle speed and start reversing without letting foot off the accelerator pedal or holding the brake. The same can be done for moving from reverse to forward direction.

## Volvo Dynamic Steering has multiple benefits:

- Driver effort / strain reduced upto 85%. Driver wear and tear injuries reduced through lower shunting forces (light steering at low vehicle speeds)
- Reduced steering kicks caused by potholes and other road damages.
- Reduction of directional deviations caused by gusts of wind or banked roads.
- The steering wheel will return to neutral when the truck is moving, thus making both reversing and forward driving at low speed easier.
- Stability Assist helps the driver to keep control of the vehicle by a guiding steering torque when the trucks start to skid.

Pre-trip check diagnoses all the vital parameters of the truck and alerts if something needs your attention with pop up message on the driver information display. If not, just turn the ignition and keep rolling.



I-Shift Automated Manual Transmission

## Ultra-modern displays & controls

The Driver Information Display is a fully digital 12" unit which is dynamic to suit the preferences of the driver. Choose between the classic analogue or digital view using buttons on the steering wheel. All vital statistics of the truck, alerts, driver timers driver timers, performance parameters become part of the display. What's more – connect your phone to the truck via Bluetooth and drive safe with hands-free comfort. and drive safe with hands-free comfort.

If one digital screen is not enough, there is an additional 9" touch screen Secondary information Display. This is a multipurpose unit which can display trip meters, driver coaching, camera views, infotainment etc... You can also add third party apps to suit your specific needs. The truck is always connected to your monitoring console and our Uptime center, continuously transmitting vital data. We can remotely upgrade or install new software on the truck.

This gives you a better overview, making it easier to handle demanding situations like loose soil, slush etc... The more you turn the knob, the more traction you get. You also get visual feedback of the traction status in the instrument display.

The new Traction Control unit gathers everything to do with Traction Control in one place.



Driver Coaching



Traction control knob & display



Driver information display

## Enhanced productivity

The 500 hp engine with 2500 Nm torque, overdrive gearbox, reinforced chassis and parabolic suspension, 10T each on front axles and all new 38T bogie axle have added 15% higher payload capacity with a 25.2 cu.m SAE heap rock body.





# Volvo FMX 500 8x4 Off-road Dump Truck

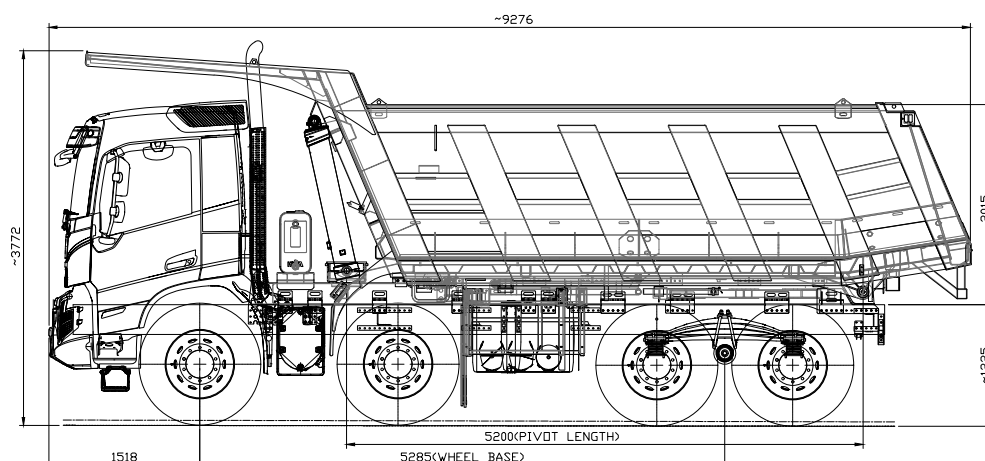
## Technical specifications

ENGINE (D13A500)	
Six-cylinder, in-line direct-injection diesel engine	
Overhead camshaft with four valves per cylinder	
Electronically regulated fuel injection with unit injectors	
Heavy duty turbocharger and intercooler	
Engine management system with driving information and diagnosis	
Exhaust after treatment by Selective Catalytic Reduction (SCR) technology with additional AdBlue tank	
Displacement	12.8 litre
Bore x stroke	131 mm x 158 mm
Compression ratio	17.8 :1
Max. power	500 hp @ 1400-1900 rpm
Max. torque	2500 Nm @ 1050-1400 rpm
Economy speed range	1000-1500 rpm
Emissions	BS-IV / Euro 4
Max. engine brake power	503 hp (VEB+) @ 2300 rpm
CLUTCH	
Power assisted push-type single plate friction disc	
Plate diameter	430 mm
GEARBOX (ATO2612G)	
I-Shift overdrive gearbox (Automated range / splitter gearbox)	
Heavy duty transmission oil cooler with additional radiator	
Enhanced software for mining and off-road conditions	
Change Direction	
Economy, Standard, Performance, Off-road drive modes	
No. of gears	12 Forward + 4 Reverse
POWER TAKE-OFF	
Clutch dependent gearbox mounted power take-off	
FRONT AXLES	
Twin heavy duty reinforced steerable front axle with high ground clearance	
Capacity (twin axles)	20000 kg
REAR AXLES	
Volvo Construction Equipment make	
Differential locks – inter-wheels and inter-axles	
Differential Lock Control (DLC)	
Traction Control System (TCS)	
Ratio	7.22:1
Capacity (Tandem axles)	38000 kg
SUSPENSION	
Front	
Parabolic leaf suspension	
Double-action shock absorbers and stabilizers	
No. of leaves	4
Rear	
Heavy duty bogie suspension with parabolic leaf spring	
Rubber-journaled V-stays, reaction rods, stabilizer and two shock absorbers	
No. of leaves	4

WHEELS & TYRES	
Tyre size	12" x 24" Cross Ply (20 Ply rating)
Tyre type	Special reinforced tyres
Wheel rim size	8.5" x 24"
Total no. of wheels fitted	12
1 no. spare wheel rim and tyre	
CHASSIS FRAME	
'C' channel section side members made of high strength steel and reinforced cross members	
Cross Section	300 mm x 90mm x 8 mm
Full length inner reinforcement	
Inner reinforcement thickness	5 mm
STEERING	
Volvo Dynamic Steering (VDS) with stability assist	
Active and more direct steering with extra pump and torque overlay	
Dual power Emergency steering system	
Hydraulic power steering with variable displacement pump	
Tilt and telescopic adjustable steering wheel	
Steering wheel diameter	450 mm
FUEL & ADBLUE TANKS	
Steel fuel tank mounted on right hand side between 2 <sup>nd</sup> and 3 <sup>rd</sup> axle	
Fuel tank capacity	405 liters
AdBlue tank capacity	32 liters
EXHAUST SYSTEM	
Horizontal muffler, vertical exhaust outlet on right hand side	
BRAKES	
Electronic Brake System (EBS)	
Electronic Stability Program (ESP)	
Hill start aid, Active Grip Control, Auto hold	
Dual line air brake system with ABS	
Z-cam drum brakes with automatic adjustment	
Electronic parking brake activation	
Spring type parking brake chambers on 2 <sup>nd</sup> front axle, 1 <sup>st</sup> rear axle and 2 <sup>nd</sup> rear axle	
PNEUMATICS	
Gear driven, dual cylinder reciprocating air compressor	
Max. compressor capacity	900 l/min
Electronically controlled Air Production Modulator (APM)	
Total air tank capacity	123 litres
ELECTRICALS	
System voltage	24 V
Volvo enhanced flooded batteries (2 nos.) with battery re-conditioner	
Battery voltage	12 V
Battery capacity	225 Ah
Alternator capacity	110 A

<b>CAB</b>	
New FMX cabin fully suspended by four coil springs and shock absorbers	
Crash tested steel welded structure	
Accommodation	1 driver + 1 co-driver
Cabin tilt angle	70°
<b>Interiors</b>	
12" fully dynamic digital instrument cluster with Home & Focus views	
Slimmer A-pillar, Larger tinted windscreen & lower door lines enhances direct visibility	
Ergonomically designed new dashboard with easy-access stalks, switches & controls	
Electrical manually controlled climate unit	
Central door locking and power windows	
9" touch screen Secondary information display	
Air suspended driver's seat with adjustment of fore-aft, height, backrest, lumbar support, shoulder, seat cushion extension, seat tilt	
Cushioned foldable co-driver seat	
Cruise control + Downhill cruise control, Starting from 4kmph	
Red safety belt	
Infotainment system and Bluetooth connectivity	
<b>Exteriors</b>	
Aerodynamically designed with smooth surfaces and rounded corners at the front	
Heavy duty bumper with extremely robust design and high approach angle	
Robust front towing device rated for 32 tonnes	
Rear view camera with color display in dashboard for enhanced visibility	
Passenger side camera in the lower mirror housing	
Distinct V-shape daytime running light (DRL)	
New heavy duty headlamp unit with higher illumination main beam	
Electrically operated steel roof hatch as emergency exit	
<b>TELEMATICS</b>	
Volvo Connect on-board Telematics collects and transmits all the vital statistics and performance parameters of the truck	
Performance and health of the truck can be monitored from the convenience of your home.	

<b>TOOLS &amp; ACCESSORIES</b>	
Standard tool kit, first aid kit, two warning triangles, bulb and fuse kit	
20 ton hydraulic jack	
<b>TIPPER BODY &amp; HYDRAULICS</b>	
All steel welded construction low C G Rock body	
SAE Heap volume	25.2 Cu.m
Floor, sideboard and headboard made of high tensile wear resistant steel	
6 nos angular solid rock breakers on the floor	
Full length canopy	
Tipping angle with knock-off valve	49 deg
Heavy duty front mounted telescopic cylinder	
Direct mounted hydraulic pump on PTO	
Oil tank with breather filter, oil level indicator and return line filter	
Oil tank capacity	135 liters
<b>VEHICLE DIMENSIONS mm</b>	
Wheel base	5285
Overall length	9276
Overall width	2800
Overall height	3772
Turning circle diameter	23300
Minimum ground clearance	368
<b>VEHICLE WEIGHTS kg</b>	
Unladen weight	20450
Front axles (twin)	20000
Rear axles (Bogie)	38000
Gross Vehicle Weight	58000
<b>PERFORMANCE DATA</b>	
Economy speed range on top gear	39-59 kmph
Max. speed (with electronic speed limiter)	45 kmph



Caution: Do not drill or weld on the frame. Note: Volvo has a policy of continual product improvement. The specifications / images shown here are indicative and are subject to change without prior notice. Performance parameters are subject to stability of the vehicle.

# VOLVO

April 2024 / Volvo FMX 500 8x4 Off-road Dump Truck



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