

V O L V O

Volvo FMX 420 25 Cu.m Tipper

# Redefining Construction



Volvo Trucks. Driving Progress



# VOLVO FMX 420 8X4

## Safety always remains the prime value pillar

Volvo is synonymous with safety. The slimmer A-pillar, larger windscreen and lower door lines improves direct visibility. 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. Electrically operated steel roof hatch provided as emergency exit. Electronic braking system give you all the more confidence while driving in rough terrain. 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 reduces brake wear and improve service life.

The truck is provided with reverse camera with the view available on the digital instrument panel.

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



Rear view camera





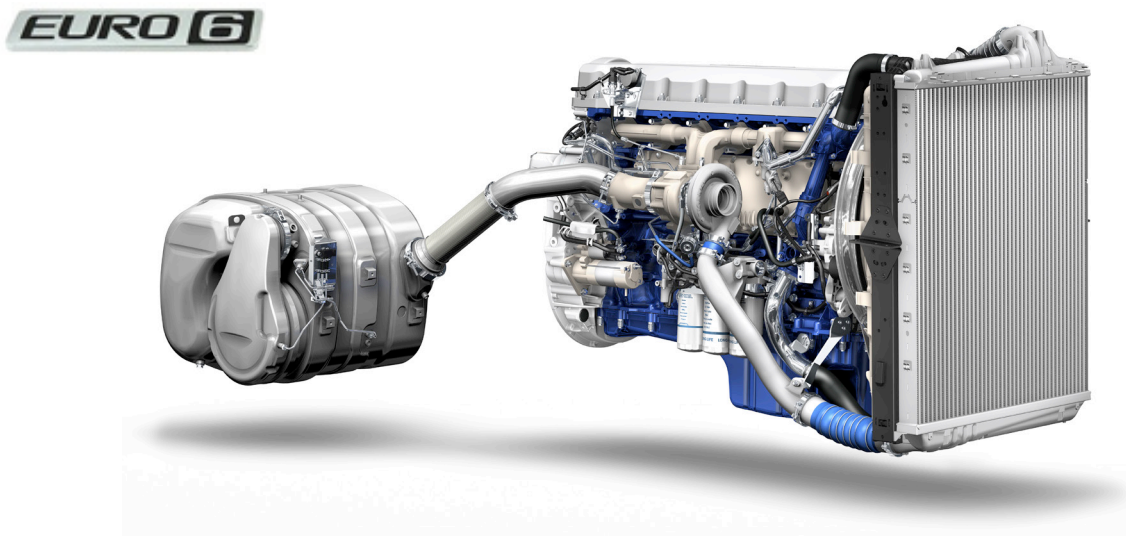
## Most comfortable cab

Drivers are the most important part of the trucking industry and their comfort is directly proportional to the productivity. The FMX420 cab has been designed keeping this in mind. With higher cabin space, climate control with enhanced thermal insulation, 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.



## More efficient

The aerodynamically designed cabin gives better fuel economy. Volvo has been improving their Euro 6 technology since 2013. The engine management system, better gear shift programming over and above subtle design improvements in the engine like smoother cylinder liners, oil scraper ring, turbo impeller with inverse design, low viscous VDS 5 oil with longer change intervals help save some more liters of fuel in the long run.



## Convenience redefined

The Volvo FMX420 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 gear control lever fits snugly in palm. Switch between drive modes like economy, standard, performance and off-road with the push of a button. With I-Shift driver has one less activity to focus on.

Add to this cruise control and downhill cruise control to maintain speed.

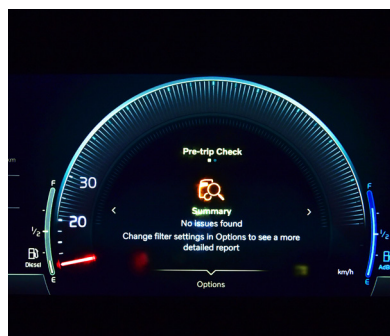
Pre-trip check diagnoses all the vital parameters of the truck and alerts if something needs your attention with pop up message on the driver information

display. If not, just turn the ignition and keep rolling. You can avoid the physical inspection of the truck at the beginning of every shift, thus improving the utilization.

Auto Hold function which is an extension of electric parking brake and Hill Start Aid offers more convenience and extra safety. When driver brakes the truck to standstill position, Auto Hold retains the position. Driver can take his foot off the brake, and all wheels brakes will stay on. Auto Hold is released when the accelerator is pressed.



Driver information display



Pre-trip check diagnosis



I-Shift Automated Manual Transmission



## Ultra-modern displays & controls

The Driver Information Display on the cabin 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 etc., become part of the display. What's more – connect your phone to the truck and drive safe with hands-free comfort.

The Traction Control unit makes 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.



Traction Control knob & display



# Technical specifications

## ENGINE - D13K420

Six-cylinder, in-line direct injection diesel engine	
Overhead camshaft with four valves per cylinder	
Electronically regulated common rail 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 Exhaust Gas Recirculation (EGR)	
Displacement	12.8 litre
Bore x stroke	131 mm x 158 mm
Compression ratio	18.0 :1
Max. Power	420 hp @ 1404-1700 rpm
Max. Torque	2100 Nm @ 905-1400 rpm
Economy speed range	950-1400 rpm
Emissions*	BS-VI / Euro 6
Max. Engine brake power	456 hp @ 2300 rpm

\* Emission requirements conform to ECE/EEC regulations and AIS 137 as notified by MoRTH vide GSR 889(E) dtd.16.09.2016 w.e.f 01 April, 2020.

## CLUTCH

Power assisted push-type single plate friction disc	
Plate Diameter	430 mm

## GEARBOX - AT2612G

I-Shift (Automated range / splitter gearbox)	
Heavy duty transmission oil cooler with additional radiator	
I-Roll, Shift strategy, smart cruise control features for economy driving	
Enhanced software for off-road conditions	
Economy, Standard, Performance, Off-road drive modes	
No. of gears	12 forward + 4 reverse

## POWER TAKE-OFF

Clutch dependent gearbox mounted power take-off	
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## FRONT AXLES

Twin heavy duty steerable front axle with high ground clearance	
Capacity (twin axles)	20000 kg

## REAR AXLES

Drive tandem hub reduction axle with four planetary gears	
Differential locks – inter-wheels and inter-axes, Differential Lock Control (DLC)	
Traction Control System (TCS)	
Ratio	5.41:1
Capacity (Tandem axles)	32000 kg

## SUSPENSION

### Front

Parabolic suspension with S-shaped leaf geometry	
Double action shock absorbers and stabilisers	
No. of leaves	3

### Rear

Heavy duty bogie suspension with conventional multi-leaf spring	
Rubber journalled V-stays, reaction rods, stabilizer and two shock absorbers	
No. of leaves	11

## WHEELS AND TYRES

Tyre Size	12" x 24" Cross Ply
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	
Cross Section	300mm x 90mm x 8mm
Full length inner reinforcement	
Inner reinforcement thickness	5 mm

## STEERING

Hydraulic power steering with variable displacement pump	
Tilt and telescopic adjustable steering wheel	
Steering Wheel Diameter	500 mm

## FUEL AND ADBLUE TANKS

Fuel tank mounted on the left hand side between 1 <sup>st</sup> and 2 <sup>nd</sup> front axle	
Fuel tank capacity	290 litres
AdBlue tank capacity	57 litres

## EXHAUST SYSTEM

Horizontal muffler, vertical exhaust outlet on right-hand side	
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## BRAKES

Electronic Brake System (EBS)	
Dual-line air brake system with ABS	
Auto Hold, Active Grip Control	
Auxiliary Engine Brakes (Exhaust Pressure Governor)	
Speed limited to 5 kmph when body not in position	
Z-cam drum brakes with automatic adjustments	
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, double-cylinder reciprocating air compressor	
Max. compressor capacity	870 l / min
Electronically controlled air production modulator (APM)	
Total air tank capacity	123 litres

## ELECTRICALS

System voltage	24V
Volvo enhanced flooded batteries (2 nos.) with battery reconditioner	
Battery voltage	12V
Battery capacity	225Ah
Alternator capacity	110A

## CAB

FMX day 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°

## Interiors

12" fully dynamic digital instrument cluster with Home & Focus views

Slimmer A-pillar, larger 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

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 4 kmph

Red safety belt

## Exteriors

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 colour display in dashboard for enhanced visibility

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

## TELEMATICS

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

## TOOLS AND ACCESSORIES

Standard tool kit, first-aid kit, two warning triangles, bulb and fuse kit

20 ton hydraulic jack

## TIPPER BODY & HYDRAULICS

All Steel U-type construction low CG body

Mechanically operated tail door with double hinge

Struck volume 25 Cu.m

Floor, sideboard and headboard made of high tensile wear resistant steel

Tipping angle with knock-off valve 47 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 130 litres

## VEHICLE DIMENSIONS mm

Wheel base 5035

Overall length 8703

Overall width 2597

Overall height 3749

Turning circle diameter 22000

Minimum ground clearance 390

## VEHICLE WEIGHTS

Laden weight, kg (as per CMVR limits)

Front axles (Twin) 14000

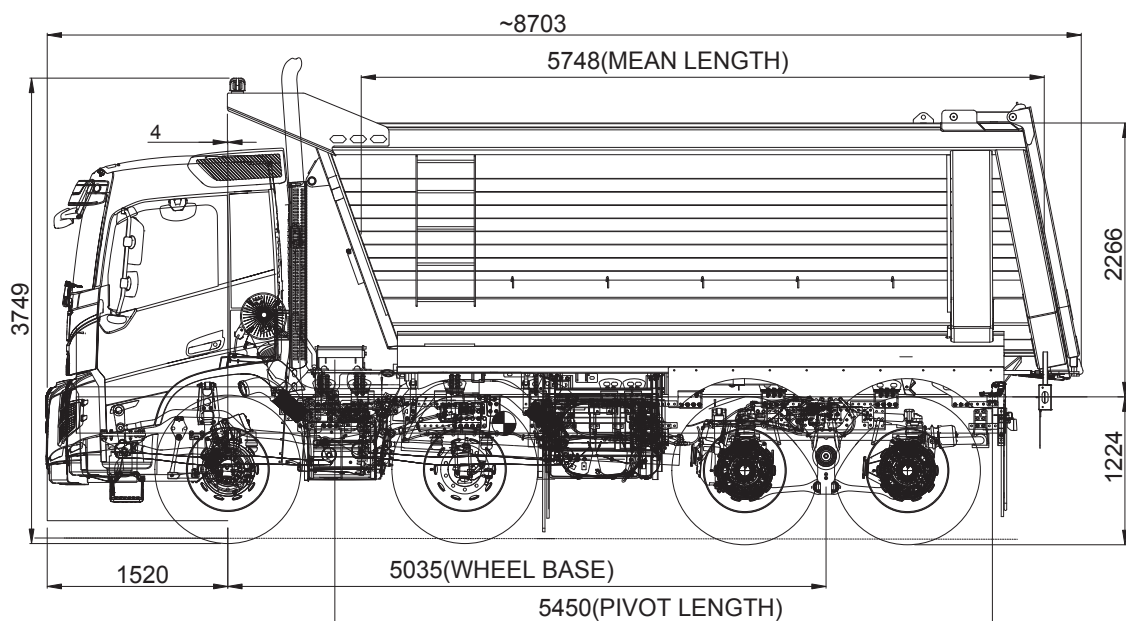
Rear axles (Bogie) 21000

Gross vehicle weight 35000

## PERFORMANCE DATA

Economy speed range on top gear 39.4 - 58.1kmph

Max. speed (with electronic speed limiter) 60 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

November 2024 / Volvo FMX 420 25 Cum Tipper



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