

**V O L V O**

Volvo FM 420 4x2 Tractor

# Setting new benchmarks in express cargo logistics



Volvo Trucks. Driving Progress



# VOLVO FM 420 4X2 TRACTOR

**Power & comfort meets productivity & reliability.**

## **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%. Tinted windshield helps reduce glare and improved electrically controlled rear view mirrors gives you the best views. With this improved visibility, the driver is more confident while driving long trucks, 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. Airbags ensure further passive safety. Electronic braking system and Electronic stability Control give you all the more confidence to tame the roads. A glass roof hatch is provided which improves cabin aesthetics due to more light coming in, while also acting as an emergency exit.





## Most comfortable cab

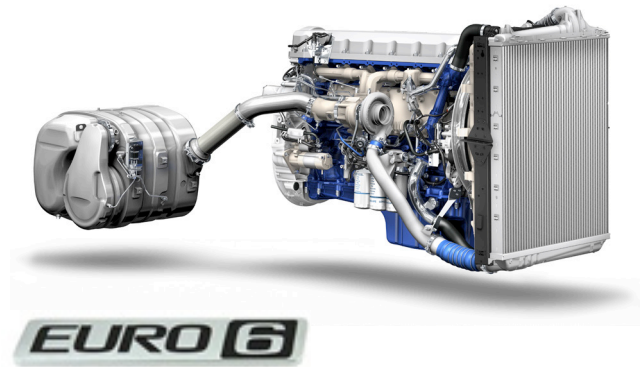
Drivers are the most important part of the trucking industry and their comfort is directly proportional to the productivity. The new FM420 cab has been designed keeping this in mind. With 1000 ltr more cabin space, enhanced thermal insulation, 2dB quieter cab, and excellent internal and external storage space, soft closure of doors, pneumatic suspension and better vibration arresting on air suspended cab, comfortable bunk bed that drivers are guaranteed to feel at home.





## More efficient

The cabin aerodynamics and air deflectors are improved to give better fuel economy. Volvo has been improving their Euro 6 technology since 2013. The latest 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, new low viscous VDS 5 oil all help save some more liters of fuel in the long run. The trucks are designed to run round the clock and the 810 liter fuel tank ensures that the trucks don't have to stop often for refueling.



## Convenience redefined

The new FM420 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 and performance with a push of a button. With I-Shift your driver has one less activity to focus on.

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

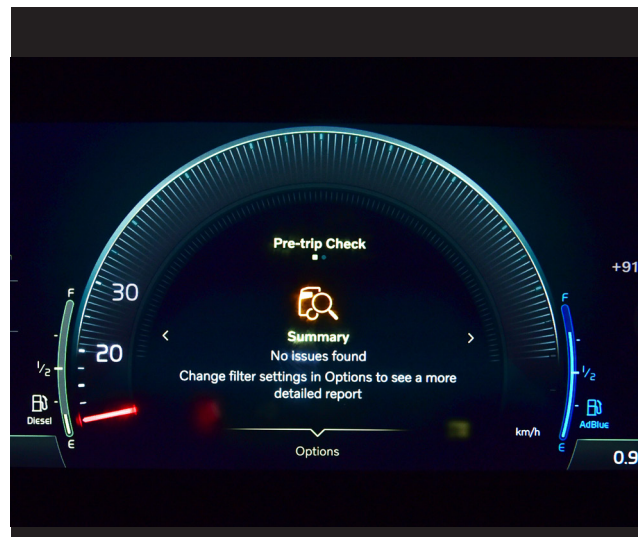
Pre-trip check diagnoses all the vital parameters of the truck and alerts if something needs your attention with pop up message on the driver information display. If not, just turn the ignition and keep rolling.



I-Shift Automated Manual Transmission



Driver information display



Pre-trip check diagnosis



## Ultra-modern displays & controls

The Driver Information Display on the new cabin is a fully digital 12" unit which is dynamic to suit the preferences of the driver. Choose between the classic analogue view or digital using buttons on the steering wheel. All vital statistics of the truck, alerts, driver timers, alerts etc., become part of the display. What's more – connect your phone to the truck 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 load indicator, trip meters, driver coaching, camera displays, 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 centre, continuously transmitting vital data. We can remotely upgrade or install new software on the truck.



Driver coaching



Driver information display with payload view



# Technical specifications

ENGINE	
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 @ 1400-1800 rpm
Max. torque	2100 Nm @ 860-1400 rpm
Economy speed range	950-1400 rpm
Emissions*	BS-VI / Euro 6
Max. engine brake power	503 hp (VEB+) @ 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	
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	
No. of gears	12 Forward + 4 Reverse
Economy, Standard, Performance drive modes	
FRONT AXLE	
Heavy duty steerable front axle	
Capacity	8000 kg
REAR AXLE	
Driven single reduction solo axle	
Differential lock - Inter wheels	
Ratio	3.40:1
Capacity	13000 kg
SUSPENSION	
Front	
Parabolic leaf suspension	
Double-action shock absorbers and stabilizers	
No. of leaves	2
Rear	
Electronically controlled air suspension with 3 driving levels	
Rubber insulated V-stays and reaction rods, stabilizer & two shock absorbers	
No. of air bellows	4

WHEELS AND TYRES	
Tyre size	295/80R22.5, Radial tubeless
Wheel rim size	8.25" x 22.5"
Total no. of wheels fitted	6
1 no. spare wheel rim and tyre	
CHASSIS FRAME	
'C' channel section side members made of high strength steel	
Depth	300 mm
Flange width	90 mm
Section thickness	8 mm
STEERING	
Hydraulic Power Steering	
Tilt & Telescopic adjustable steering wheel	
Steering wheel diameter	450 mm
FUEL AND ADBLUE TANKS	
Steel fuel tank mounted on right and left side of chassis	
Left Fuel tank capacity	405 litres
Right Fuel tank capacity	405 litres
AdBlue tank capacity	64 litres
EXHAUST SYSTEM	
Vertical exhaust outlet on right hand side	
BRAKES	
Electronic Brake System (EBS)	
Electronic Stability Program (ESP)	
Hill start aid	
Dual line air brake system	
Z-cam disc brakes with automatic adjustment & ABS	
Electronic parking brake activation	
Spring type parking brake chambers on front and rear axle	
Stationary trailer brake control	
PNEUMATICS	
Gear driven, dual cylinder reciprocating air compressor	
Max. compressor capacity	900 l/min
Electronically controlled Air Production Modulator (APM)	
Total air tank capacity	101 litres
ELECTRICALS	
System voltage	24 V
Volvo enhanced flooded batteries (2 nos)	
Battery voltage	12 V
Battery capacity	170 Ah
Alternator capacity	110 A
ADR - Adaptation with two switches, one inside cab (Dashboard) and one on cab back. (Only on ADR Tractor)	
7 pol electrical trailer connector	
15 pol electrical trailer connector (ADR certified). (Only on ADR Tractor)	

### CABIN

New FM sleeper cabin fully suspended by four coil springs and shock absorbers

Crash tested steel welded structure

Accommodation 1 driver + 1 co-driver + 1 bunk

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

Air bag on driver side

Electrical manually controlled climate unit

Central door locking and power windows

Ergonomically designed new dashboard with easy-access stalks, switches & controls

9" touch screen Secondary information display

Air suspended driver's seat with adjustment of fore-aft, height, back rest, lumbar support, shoulder, seat cushion extension, seat tilt

Cushioned foldable co-driver seat

Cruise Control + Downhill cruise control

Red safety belt

### Exteriors

Aerodynamically designed with smooth surfaces and rounded corners at the front

Aerodynamic roof air deflector

Cab side air deflectors

New heavy duty headlamp unit with higher illumination main beam

Fog light and static cornering light

### 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

### FIFTH WHEEL COUPLING

50 mm (2") heavy duty fifth wheel coupling

Standard kingpin offset (before rear axle) 475 mm

Height from ground (unladen) 1236 mm

Height from ground (laden) 1203 mm

### VEHICLE DIMENSIONS,mm (As per CMVR)

Wheel base 3500

Overall length 5690

Overall width 2534

Overall height (including Air Deflector) 3994

### VEHICLE WEIGHTS kg (as per CMVR limits)

Front axle 7000

Rear axle 12500

GCW with 2 axle trailers 40500

GCW with 2 axle air suspended trailer 42500

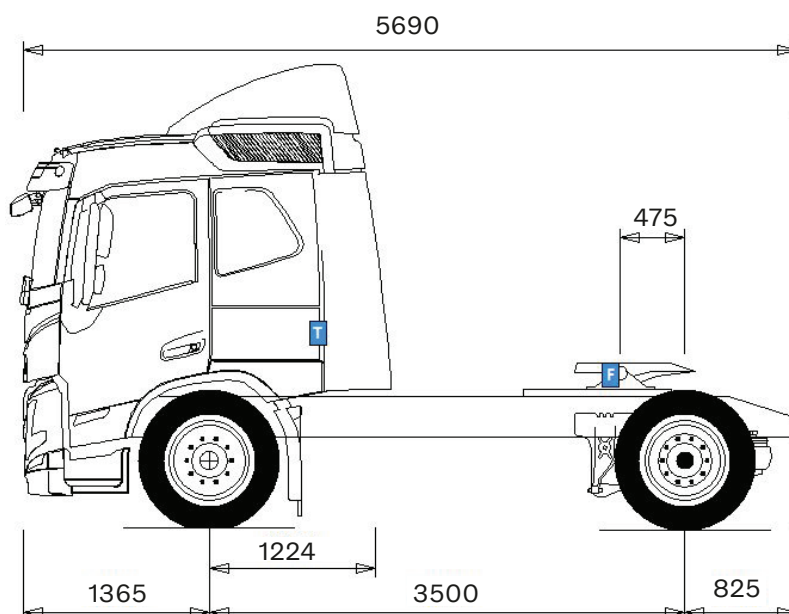
GCW with 3 axle trailer 46500

GCW with 3 axle air suspended trailer 49500

### PERFORMANCE DATA

Economy speed range on top gear 53.4 - 78.7 kmph

Max. Speed Limited 80 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.

# V O L V O

For more information contact:

Volvo Trucks

Yalachahally, Tavarekere Post, Hosakote Taluk, Bangalore 562 122, India.

Phone: +91 80 6788 7000 | [vtimarketing@volvo.in](mailto:vtimarketing@volvo.in) | [www.volvotrucks.in](http://www.volvotrucks.in)

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