Tailoring your Volvo FE.

Welcome to the Volvo FE. The flexible chassis layout and VBI (Volvo Bodybuilder Instructions) make it easy to prepare your vehicle for a superstructure. With driveline, cabs and equipment packages that provide you with a wealth of options, the Volvo FE is the perfect truck for your specific business needs.

WHEELBASES	☐	☐	☐
Wheelbase (mm)	**4×2 rigid**	**6×2 rigid**	**6×4 rigid**
☐ 3200			•
☐ 3500	•	•	•
☐ 3700	•	•	
☐ 3850			•
☐ 3900	•	•	
☐ 4100	•	•	
☐ 4200			•
☐ 4300	•	•	
☐ 4500	•	•	•
☐ 4750	•	•	
☐ 5000	•	•	•
☐ 5250	•	•	
☐ 5500	•	•	•
☐ 5800	•	•	
☐ 6100	•	•	
☐ 6450	•	•	
☐ 6800	•		

CHASSIS HEIGHT		
	Tyre	**Height** (mm)
☐ Low	315/60R22.5"	880
☐ Medium	315/70R22.5"	950
☐ High	315/80R22.5"	1050

FUEL TANKS

The fuel tanks are available in plastic, steel or aluminium. Fuel volume varies from 160 to 630 litres. There are two heights of D-shaped tanks – 560 mm and 710 mm.

ADBLUE TANK

The AdBlue tank is made of plastic and the volume is 32 litres. The AdBlue pump is integrated in the tank module.

REAR AXLES

There are four different rear axles available. Maximum axle load varies from 13 up to 23 tonnes. All axles have differential lock as standard.

FRONT AXLES

Front axle loads vary from 7.1 up to 8 tonnes.

TAG AXLES

These are available in several configurations – fixed with single or dual wheels, or with fixed or steered tag axle. Axle load 6.7, 7.1, 7.5, 9.5 or 10.5 tonnes.

REAR SUSPENSION					
Type	**Axle combination**	**Suspension type**	**Axle/bogie load** (tonnes)	**Axle type**	**Tag axle**
Solo axle					
☐ RAD-L90	4×2	Parabolic/S-spring Parabolic	13	Single/hub	
☐ RAD-KR	4×2	Air	13	Single/hub	
Bogie					
☐ RADT-KR	6×2	Air	19/21	Single/hub	Fixed/steered
☐ RADD-BR	6×4	Parabolic	21	Single/hub	

1 CHASSIS

CHASSIS FEATURES

The chassis is developed to give optimum space for superstructure and equipment. Here are some of the key features, which may vary depending on the truck's specification.

FRAME BODY BUILDER HOLE ROW

The upper hole row is reserved for the body builder. All brackets in the upper hole row have an offset and an 8 mm spacer. No rivets are used in the upper hole row.

CRANE PREPARATION

Crane plates on the chassis can be factory-mounted.

BRAKES

The Volvo FE has pneumatic brakes with ventilated discs front and rear. The EBS (Electronically controlled Brake System) anti-locking disc-brake system provides both faster and safer braking response and promotes less brake wear. The system includes features such as ABS and Brake Blending. With Brake Blending, the system utilises the vehicle's various brakes for more uniform brake application and less wear on both the wheel brakes and tyres. The extended EBS medium package includes "Hill Hold".

ESP (ELECTRONIC STABILITY PROGRAM)

Standard ESP helps maintain directional stability in difficult conditions, and also helps in preventing rollover.

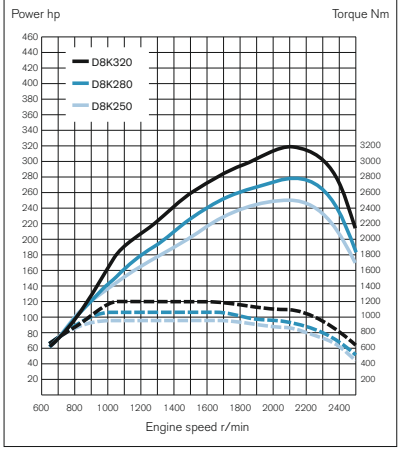
☐ HYDRAULIC RETARDER FOR AL306 AUTOMATIC GEARBOXES

The compact, integrated hydraulic retarder (RET-HYDR and RET-TPT variants) is mounted on the gearbox. The max effect is 400 kW. Maximum ratio in the torque converter (TC418) is 1.98:1.

ENGINE D8K - EURO-6

Power/Torque

Net output according to: EC 582/2011



☐ **D8K250** (184 kW)	
Max power at 2,100 r/min	250 hp
Max torque at 900–1,700 r/min	950 Nm
☐ **D8K280** (206 kW)	
Max power at 2,100 r/min	280 hp
Max torque at 950–1,700 r/min	1,050 Nm
☐ **D8K320** (235 kW)	
Max power at 2,100 r/min	320 hp
Max torque at 1,050–1,600 r/min	1,200 Nm

D8K	
No. of cylinders	6
Displacement	7.7 dm^3
Stroke	135 mm
Bore	110 mm
Compression ratio	17.5:1
Economy revs	1,000–1,700 r/min
Exhaust braking effect (2,800 r/min)	120 kW
Compression brake effect (2,800 r/min)	170 kW
Oil filters	1
Oil change volume, incl. filter	25.5 l
Cooling system, total volume	17 l
Oil change interval: Up to 100,000 km, or once a year (Long haul)/75,000 or once a year (Distribution): using VDS4.	

FUEL
EN 590 (EU norm) max 10 ppm sulphur.

ENGINE-MOUNTED POWER TAKE-OFF	
Ratio 1:1	600 Nm*

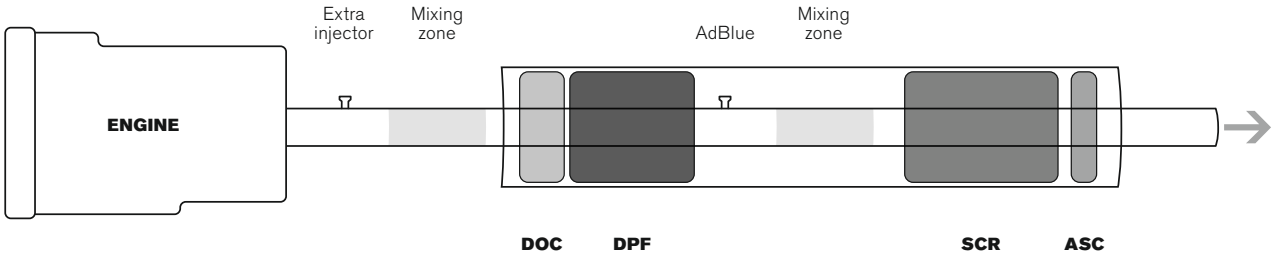
* Torque output both when driving and standing still.

2 DRIVELINE

EURO-6

We've come a long way in reducing environmental impact. Now it's time for Euro-6, the toughest step so far, putting extremely strict limits on emissions of particulate matter PM (0.01 g/kWh) and oxides of nitrogen NOx(0.40 g/kWh for steady-state cycle and 0.46 g/kWh for transient cycle).

OUR SOLUTION FOR EURO-6



ENGINE

A closed loop butterfly exhaust brake, a turbo, a cooled EGR and more. The new engine components serve two main purposes: to improve gas-flow and make sure the exhausts reach the after-treatment system at optimum temperature.

EXTRA INJECTOR

A special diesel injector is used for heat management of the Diesel Particulate Filter DOC and ensures the efficiency of the Diesel Particulate Filter DPF and good Selective Catalytic Reduction SCR functionality.

DIESEL OXIDATION CATALYST (DOC)

The DOC produces the NO_2 necessary for the DPF to efficiently combust the particulates. In cold conditions, it also provides the heat needed for regeneration.

DIESEL PARTICULATE FILTER (DPF)

The filter collects particulate matter (PM) and stores it until it's burned off during auto-regeneration. If the temperature is not achieved during the duty cycle there is a switch in the cab to regenerate the DPF when stationary. There is also a regeneration gauge in the dash.

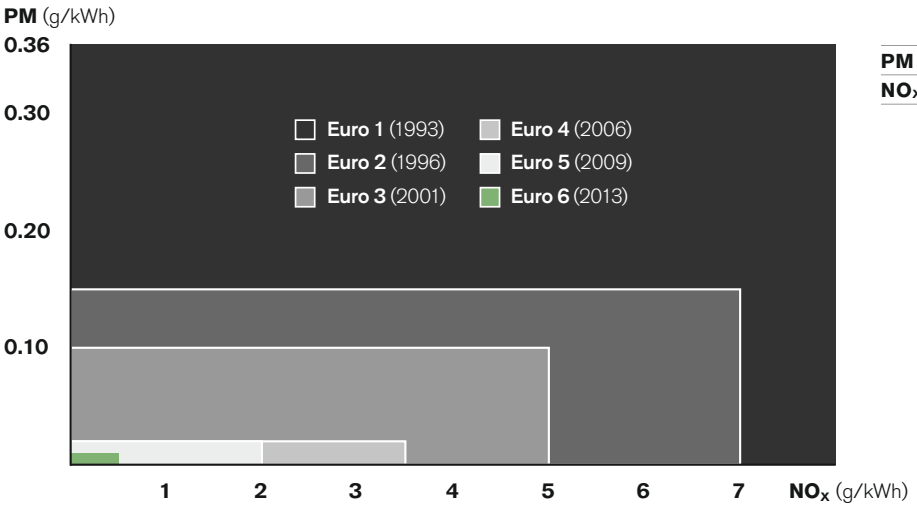
SELECTIVE CATALYTIC REDUCTION (SCR)

In the mixing zone, the exhaust gas is sprayed with AdBlue – which is an ammonia NH3 solution. When they reach the catalysts, the oxides of nitrogen (NO_x) are efficiently transformed into harmless nitrogen gas and water.

AMMONIA SLIP CATALYST (ASC)

The last step before the tailpipe where the remaining ammonia (NH_3), if any, is removed.

EUROPEAN EMISSION STANDARDS 1993-2013



PM = Particulate Matter
NO_x = Oxides of Nitrogen

GEARBOXES

The manual gearboxes are operated with servo assistance. The short gear lever, on the engine tunnel, and offers short, vibration free lever movements. The automatic transmission is operated via push-buttons. And the new I-Shift two pedal transmission control is mounted on the steering column. All gearboxes can be specified with a power take-off.

GEARBOXES

Type		Number of gears	Max torque (Nm)	GCW approval (tonnes)	D8K250	D8K280	D8K320
☐ ZTO1006	Manual	6	1050	32	●	●	
☐ ZTO1109	Manual	9	1200	44	●	●	●
☐ AT2412E	I-Shift	12	2400	44	●	●	●
☐ AL306	Automatic	6	1300	32	●	●	●

I-SHIFT

I-Shift is Volvo's gearbox with automated gearchanging for all applications. Well known for fast gear shifting, it both increases driver comfort and reduces fuel consumption. Can be fitted with a power take-off. For certain applications, an extra transmission oil cooler is available.

I-SHIFT SOFTWARE PACKAGES

BASIC

The basic software designed to suit most transport demands.

DISTRIBUTION & CONSTRUCTION

Improving performance in more challenging conditions, for example tight manouevring.

FUEL ECONOMY

Designed to optimise the driving for best fuel economy.

I-SHIFT SOFTWARE PACKAGES

Functions	Basic	☐ Distribution & Construction	☐ Fuel Economy
Basic Shift Strategy	●	●	●
Performance Shift	●	●	●
Basic Gear Selection Adjustment	●	●	●
Gearbox Oil Temperature Monitor	●	●	●
Enhanced Shift Strategy		●	●
Launch Control		●	●
I-Roll			●
Kick-down inhibition/activation			●
Additional options			
Enhanced PTO Functions	●	●	●
Enhanced Gear Selection Adjustment, including kick-down	●	●	●

2 DRIVELINE

POWER TAKE-OFFS

Name/Variant	Gearbox	Type	Speed ratio	Max torque (Nm)	Rotation
☐ PR-HP4T	AL306	Pump con.	1:1.401	400	Same
☐ PR-HF4TL	AL306	Flange	1:1.139	400	Same
☐ PR-HF6TH	AL306	Flange	1:1.401	600	Same
☐ PR-HP6TL	AL306	Pump con.	1:1.139	600	Same
☐ PTRD-D1D	AT2412E	Flange	1:1.300–1.650	550	Inverse
		Pump con.	1:0.600–0.770	1000	Same
☐ PTR-FH1	AT2412E/ZTO1109	Flange	1:0.970	800	Inverse
☐ PTR-PH1	AT2412E/ZTO1109	Pump con.	1:0.970	800	Inverse
☐ PTR-FH2	AT2412E/ZTO1109	Flange	1:1.253	430	Same
☐ PTR-PH2	AT2412E/ZTO1109	Pump con.	1:1.253	430	Same
☐ PTR-FH5	AT2412E/ZTO1109	Flange	1:1.778	450	Same
☐ PTR-PH4	AT2412E/ZTO1109	Pump con.	1:1.778	450	Inverse
☐ PTR-ZF4	ZTO1006/ATO1056	Flange	1:1.700	320	Same
☐ PTR-ZF5	ZTO1006/ATO1056	Pump con.	1:1.700	320	Same
☐ PTR-FH5	ZTO1006/ATO1056	Flange	1:0.962	450	Same
☐ PTR-PH4	ZTO1006/ATO1056	Pump con.	1:0.962	450	Same
☐ PTR-ZF2	ZTO1109	Flange	1:1.900	410	Same
☐ PTR-ZF3	ZTO1109	Pump con.	1:1.900	410	Same
☐ PTRA-PH1	ZTO1109	Pump con.	1:0.970	600	Inverse
☐ PTRA-PH2	ZTO1109	Pump con.	1:1.253	430	Same

REAR AXLES

Type	Axle	Gear	Max torque (Nm)	Max axle load (tonnes)	GCW approval (tonnes)
Single reduction					
☐ RSS1344C	Solo	Hypoid	2600	13	44
☐ RTS2370A	Tandem	Hypoid	3550	23	70
Hub reduction					
☐ RSH1370F	Solo	Spiral bevel	3550	13	70
☐ RTH2180C	Tandem	Hypoid	2100	13	65

REAR AXLE RATIOS

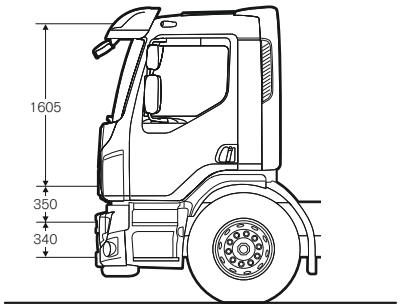
RSS1344C	RTS2370A	RSH1370F	RTH2180C
2.64:1	3.09:1	3.76:1	2.96:1
2.85:1	3.40:1	4.12:1	3.08:1
3.08:1	3.78:1	4.55:1	3.22:1
3.36:1	4.13:1	4.67:1	3.36:1
3.70:1	4.50:1	5.41:1	3.52:1
4.11:1	5.14:1	6.18:1	3.70:1
4.63:1	5.67:1	7.21:1	3.89:1
5.29:1	6.17:1		4.12:1
6.17:1			4.35:1
			4.62:1
			4.82:1
			5.12:1
			5.43:1
			5.86:1
			6.31:1

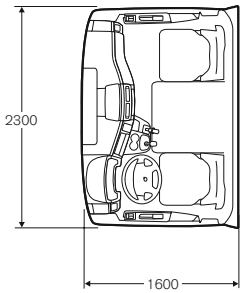
CABS

All Volvo FE cabs are aerodynamically designed to reduce air resistance and the interiors are equipped with a variety of storage facilities. Additional storage units are available as options. All seats are ergonomic and feature integrated seatbelts and head-restraints.

☐ DAY CAB

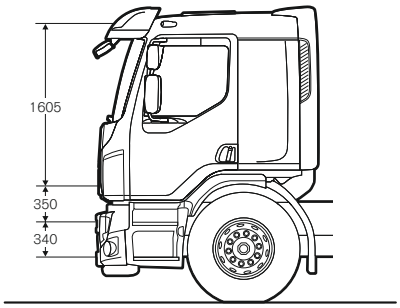
Day cab with comfortable and ergonomic driver area. Interior height 1,605 mm, length 1,600 mm, width 2,300 mm.

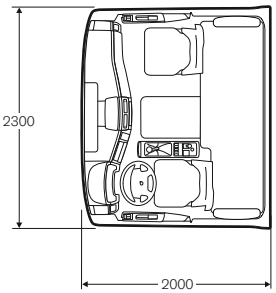




☐ COMFORT CAB

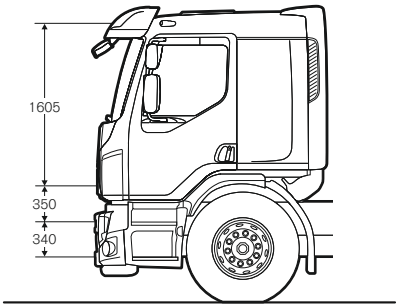
Comfort cab offers extra space that can be equipped with an occasional fold up single bunk or be used as office space with extra storage compartments. Interior height 1,605 mm, length 2,000 mm, width 2,300 mm.

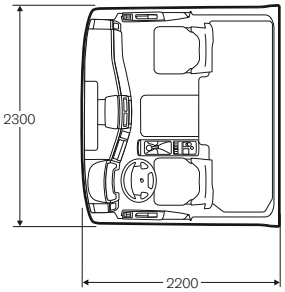




☐ SLEEPER CAB

Sleeper cab with a single bunk. Interior height 1,605 mm, length 2,200 mm, width 2,300 mm.





CAB SUSPENSION

Mechanical suspension front and rear: coil spring and shock absorber. Option of four point air suspension

DRIVER'S SEAT

Three different levels of comfort: Comfort, Standard and Economy. All three feature backrest, length, height and front tilt adjustment and integrated headrests.

PASSENGER SEAT

Three different levels of comfort are available: Standard, Economy or Basic.

COLOURS

Available in 232 fixed variants. On top of that additional colours can be ordered on Customer Adaptation.

STEERING WHEEL

The steering wheel has a diameter of 460 mm or 500 mm depending on truck configuration and can be pneumatically adjusted to the desired position.

ROOF HATCH

The cab can be equipped with either a manual or electrically operated roof hatch that can be opened 50 mm. It is available in either glass or steel.

CAB HEATING

The cab heating system is available in two variants: manually controlled, heater only, or manually controlled heater and air conditioning. A 2 kW parking heater system is available as an option.

INTERIOR STORAGE

The cab interior has many practical, easily accessible compartments for storage of documents and personal belongings. There are two storage units above the window, as well as four DIN compartments. A number of different storage and tunnel boxes, writing pad and clothes hooks can be specified as options.

AIR HORNS

Option of two roof-mounted air horns.

BED (COMFORT CAB)

The bed is offered as either a narrow 580 mm of fold up 780 mm fold up design.

4 EQUIPMENT PACKAGES

AUDIO PACKAGES			
	□	□	□
	Basic	**Medium**	**High**
Radio/CD unit			
Audio CD	●	●	●
CD-R/CD-RW		●	●
wav/wma/mp3		●	●
Speed-dependant volume control		●	●
Extended mute functions	●	●	●
Radio			
FM/AM antenna	●	●	●
FM stations	12	18	18
AM stations	6	6	6
RDS	●	●	●
Connections and interfaces			
Low-level input, 4 channels	●	●	●
3.5 mm stereo line input			●
USB connection			●
iPod interface			●
Bluetooth		●	●
Wireless remote control			●
Speakers			
Number of speakers	2	2	2
Output	2×20 W	2×20 W	2×20 W

Some of the equipment shown or mentioned may only be available as options or accessories and may vary from one country to another in accordance with local legislation. Your Volvo dealer will be happy to provide you with more detailed information. Colours may vary somewhat owing to the limitations of the printing process. We reserve the right to alter product specifications without prior notification.