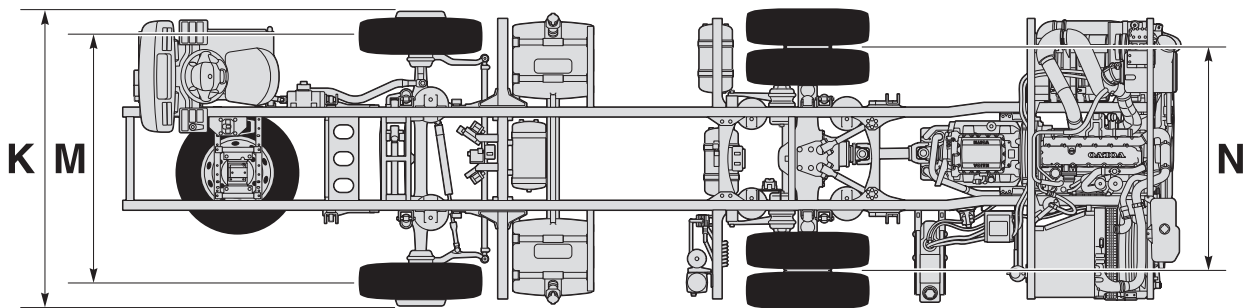
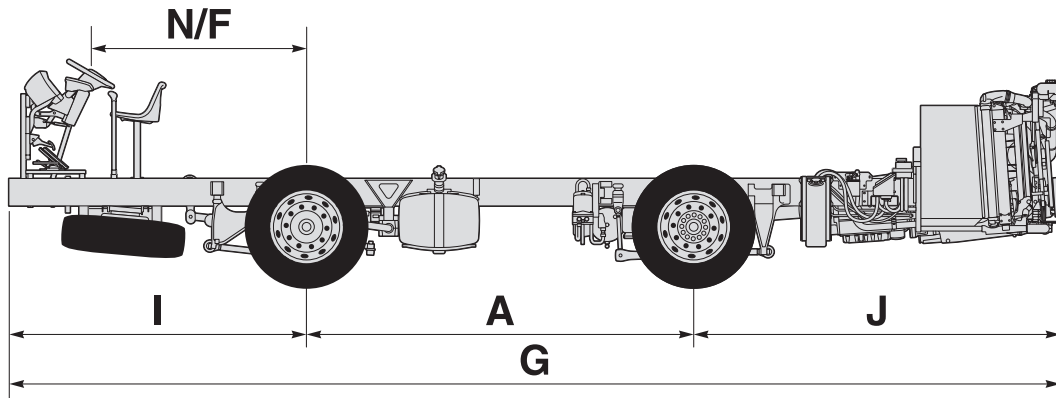


VOLVO B7R MK3

RHD, RFS, Euro 4 & 5



Dimensions & Weights

Overall dimensions

A	Transport wheelbase	3250 mm
	Wheelbase certified	4500-7400 mm
G	Overall chassis length	8887 mm
I	Front overhang	
	N steering	2400 mm
	C steering	2230 mm
J	Rear overhang	3137 mm
	Steering wheel location	
	N steering	1818 mm
	C steering	1648 mm
	Approach angle (N-steer)	7.8 °
	Departure angle	7.8 °
	Frame height in front	653 mm
X	Frame height at rear	1688 mm
	based on tyre 295/80R22.5	
	Track width with tyres	295/80R22.5" and steel disc rim
		8.25"x22.5"
M	Track, front	2052 mm
N	Track, rear	1817 mm
K	Overall width front wheels housing	2364 mm
	Overall width rear wheels	2436 mm

Weights

Permitted front axle load	7500 kg
Permitted rear axle load	12000 kg
Permitted GVW	18000 kg

Engine

6-cylinder, 4-stroke turbo-charged diesel with overhead valves and electronically controlled injection. Common Rail fuel system. Volvo EMS2.2 engine control system. Electronic oil level sensor. Fan with electronic thermostat. Crank case ventilation closed or open with pipe. On-off fan clutch. Engine software protection and on-board diagnostic to detect, warn and to take action for malfunctions leading to increased emission. Operation altitude up to 1500m above the sea level. Engine available in versions fulfilling Euro 4, Euro 5, and EEV emission requirements.

D7E 290 hp

Bore	108 mm
Stroke	130 mm
Displacement	7.14 dm ³ (l)
Output ISO 1585	213 kW (290 hp)
at	35r/s (2100 r/m)
Torque ISO 1585	1200 Nm (122kpm)
at	17.5-27.5 r/s (1050-1650 r/m)
Compression ratio	18:1
Weight	645 kg
Idling speed	600+50 rpm
High idle speed	2550 rpm
Oil change volume	28 l
Oil change intervals	up to 60000 km
Optional	Fuel water separator
Optional	Engine block heater
Optional	Engine brake

Fuel tanks

There is a choice of three fuel tanks with volumes: 2x150, 300 and 400 l. Mounted behind front axle, on the right and left hand side.
Transit tank

50 l

Exhaust and Cooling System

Stainless steel exhaust system with SCR catalytic converter, AdBlue pump and 40 l urea tank. Urea tank is mounted behind the rear axle, on the left or right side of the chassis. Catalytic converter is integrated with the silencer. Muffler sensor are linked to the On Board Diagnostics that alerts the driver if the level of air pollutants in the exhaust gases is excessive, and when AdBlue refilling is needed. Fluid cooled, pressurized cooling system.
Optional

Cyclone air filter

Transmission

ZF 6S1311BD

Mechanical 6-speed fully synchronized gearbox with integrated retarder. Much improved gearshift comfort and retarder performance.

ZF 6S-1380BD

(for Brazilian produced chassis only)

Mechanical 6 speed fully synchronized. With or without Voith 120 retarder.

ZF 6AP1400B

Fully automatic 6 speed gearbox with electronic

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control system, torque converter of first stage and integrated retarder. NBS - neutral on bus stop function.

Voith D864.5

Fully automatic 4 speed gearbox with integrated retarder and electronic control system. The torque converter also functions as a retarder. AIS - Automatic Idle Shift.

	ZF 6S1311BD
1st gear	7.997:1
2nd gear	4.684:1
3rd gear	2.807:1
4th gear	1.794:1
5th gear	1.243:1
6th gear	1.000:1
Reverse	7.316:1

	ZF	Voith
	6AP1400B	D864.5
Torque converter	1.968:1	-
1st gear	3.36:1	..5.04:1
2nd gear	1.91:1	..1.36:1
3rd gear	1.42:1	..1.00:1
4th gear	1.00:1	..0.73:1
5th gear	0.72:1	-
6th gear	0.615:1	-
Reverse	4.24:1	4.80:1

Driveline - Rear axle and tyres

Rear axle

The Volvo RS 1228C single reduction axle with seven alternative ratios available. The casing designed for higher ground clearance, lightweight and quiet operation.

Theoretical speed at max engine revs with tyre 295/80R22.5:

Ratio:.....	3.08:1	3.36:1	3.70:1
ZF 6S1311BD	126	115	
Ratio:.....	4.11:1		
ZF 6S1311BD	103		
Ratio:.....	4.63:1	5.29:1	5.63:1
6AP1400B	120	98	
Voith D864.5	119	104	97

Tyres & Rims

10-stud steel or aluminium disc wheels. Dual driving axle wheels.

Rims	Tyres
8.25"x22.5"	295/80R22.5"
7.5"x22.5"	275/70R22.5"
.....	11R22.5"
.....	12R22.5"
Optional.....	Spare wheel

Suspension and Steering

Rigid front suspension with stabilizer and four reaction rods. Improved roll stability and small turning circle. Stabilizer rear. Double-acting, hydraulic telescopic shock absorbers, two

front, two rear.

Numbers.....	Front	Rear
Air bellows	2	4
Levelling sensors	1	2

Steering gear

Power steering of ball and nut type with built-in servo unit. Approx. 4.5 turns of wheel from lock to lock.

Max wheel angle (295/80 with 8.25" rim).....49+-1°

Steering wheel diameter	450 or 500 mm
Optional.....	Side kneeling
Optional.....	Steering wheel lock

Air and Brake system

Disc brakes combined with electronic braking system EBS5, which controls ABS/ASR functions. Separate circuits for front and rear wheels. Lining wear sensing and analysis. Gear driven air compressor. Available features: brake blending, drag torque control, hill start aid, brake temperature warning, poor brake performance warning, doorbrake.

Brake disc diameter:

Front.....	434 mm
Rear.....	434 mm

Friction area:

Front axle, disc brake	2x200 cm ²
Rear axle, disc brake	2x200 cm ²

System cut-out pressure

Compressor capacity at 10 bar and engine speed 33 r/s (2000 r/m)

..... 15 dm³/s (920 l/min)

Compressor ratio

1.116:1

Air tanks standard

- Primary

30 dm³ (l)

- Front circuit

30 dm³ (l)

- Rear circuit

30 dm³ (l)

Compressed air system can easily be filled from external circuit.

Handbrake

Air operated spring brake acting directly on the rear wheels. Application is infinitely variable by means of a control on the fascia.

Vehicle Structure

The steel frame combines good stability with low weight. Precise dimensions make bodybuilding simpler. The frame structure is a combination of open channel sections and boxed sections, frame members are made of high strength steel. Long service life, increased loading capabilities. Rigidity provides good stability and driving characteristics.

Driver's seat and Station

Volvo dashboard available or instruments only supplied. Dashboard fully compatible with BEA2, two satellites on the right and the left side. Adjustable steering wheel, both height and tilt. Self canceling turn indicators.

Dashboard, center: speedometer, rev counter, AIC display, fuel gauge, coolant temperature, brakes, turbo and oil pressure, indicators, warning lamps.

Dashboard, left: emergency switch, tachograph, switches, audio control panel (option).

Dashboard, right: radio, climate control unit.

Steering wheel, left satellite: control buttons, Light Control Panel.

Steering wheel, right satellite: gearbox selector, doorbrake knob, switches and warning lamps.

Instruments, behind engine: selector switch for front or rear operation, starting, charging lamp, mechanical stop, oil gauge. These controls enable the engine to be run and controlled from the tail of the vehicle during service work.

Optional..... Tachograph
Optional..... Advanced Info Center
Optional..... Radio switches
..... in steering wheel

Electrical system

B7R chassis is equipped with Bus Electrical Architecture BEA2 with electronic databus system Multiplex 2 - a digital system for data transmission, bus systems control, monitoring and coordination of all devices controlled by electronic control units. Two link data network provides data transmission, failure detect and codes, working parameters. Multiplex 2 also provides diagnostic information for driver and workshop. There are also external lighting functions integrated in chassis Multiplex. They are activated by Light Control Panel and controlled by Light Control Module. For testing, callibrating and programming of the control units there can be used a PC based software package VCADS Pro. The system also incorporates starter inhibitor relay and one transistor regulator. Starter heater is standard.

Number of batteries

2

Voltage

24 V

Battery capacity

170 Ah

Alternators max output

2x100 A

Optional..... Amperemeter

Optional..... Fuel consumption meter

Optional..... Outdoor / indoor temp meter



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