



### Dimensions & Weight

#### Overall dimensions

A Wheelbase	5500 mm
Q Drive axle - turntable	2400 mm
P Trailer	4500 mm
G Overall chassis length	15627 mm
I Front overhang	2367 mm
J Rear overhang	860 mm
F Steering wheel location	1835 mm
Approach angle	10.5 °
Departure angle	15.4 °
U Frame height, front	745 mm
V Frame height, middle	866 mm
Y Frame height, turntable	886 mm
X Frame height, rear	866 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	2035 mm
N Track, drive	1833 mm
R Track, rear	1833 mm
K Overall width front	2471 mm
T Overall width drive	2471 mm
S Overall width rear	2471 mm

#### Weights

Permitted front axle load	7500 kg
Permitted drive axle load	11500 kg
Permitted rear axle load	10500 kg
Permitted GVW	29500 kg

### Driveline - Engine

6-cylinder, 4-stroke diesel engines with overhead valves and electronic direct injection. Turbocharger with intercooler, 4-valve technology and a unit injector for each cylinder. Mounted horizontally between axles. Volvo EMS2 engine control system. Accelerator limiter available.

Bore	131 mm
Stroke	150 mm
Displacement	12.1 dm <sup>3</sup> (l)
Compression ratio DH12D	18.5:1
Compression ratio DH12E	18:1

#### DH12D 340 hp

Output ISO 1585	250 kW (340 hp)
at	30r/s (1800 r/m)
Torque ISO 1585	1700 Nm (173 kpm)
at	20 r/s (1200 r/m)

Engine fulfils Euro 3 emission requirements.

#### DH12E 340 hp

Output ISO 1585	250 kW (340 hp)
at	30r/s (1800 r/m)
Torque ISO 1585	1700 Nm (173 kpm)
at	16-23 r/s (950-1400 r/m)

Engine fulfils Euro 4 emission requirements and Euro 5 as an option.

#### Fuel tanks

The chassis is supplied with the 450 l fuel tank. It consists of three tanks, each 150 l. Tanks are made of polyethylene, they are mounted below frame level behind the drive axle. Fuel filling is possible from left or right hand side.

Transport tank ..... 50 l

### Driveline - Exhaust and Cooling System

Stainless steel exhaust system with standard or SCR catalytic converter, AdBlue pump and 40 or 60 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. In SCR system, AdBlue is sprayed into the hot exhaust gases. As this AdBlue-exhaust gas mixture passes through the catalytic converter, a chemical reaction takes place that converts the nitrogen oxides into harmless nitrogen gas and water vapour. The technology is both simple and reliable and makes it possible to meet both current and forthcoming emissions requirements without affecting fuel economy.

Optional ..... Coolant filter

### Driveline - Transmission

#### ZF 6HP604-N

6-speed fully automatic gearbox with integral retarder and electronic control system. 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. ANS - Auto Neutral at Stop function.

	ZF 6HP 604-N	Voith D864.5
Torque conv.	1.44:1	4.96:1
1st gear	3.43:1	5.05:1
2nd gear	2.01:1	1.36:1
3rd gear	1.42:1	1.00:1
4th gear	1.00:1	0.73:1
5th gear	0.83:1	-
6th gear	0.59:1	-
Reverse	3.97:1	4.80:1

Available 3 or 6-buttons gear selectors, kick down function, retarder foot or foot and hand control.

### Driveline - Rear axle and tyres

#### Rear axle

The Volvo RS 1228B single reduction axle with three alternative ratios available. The casing designed for higher ground clearance, lightweight and quiet operation. The Volvo RS1228B is available with a differential lock. With the lock engaged, both wheel axles rotate at the same speed, thus improving get-you-there ability on slippery or soft surfaces while at the same time avoiding the risk of overloading the differential gear.

Max speed km/h at max engine revs with tyre 295/80R22.5:

Ratio: ..... 5.63:1 .. 5.29:1 .. 4.63:1  
 6HP604-N ..... 118 ..... 126 ..... 143  
 D864.5 ..... 92 ..... 98 ..... 109

Optional ..... Differential lock

#### Tyres & Rims

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

Rims ..... Tyres  
 8.25"x22.5" ..... 295/80R22.5"  
 9.00"x22.5" ..... 295/80R22.5"  
 8.25"x22.5" ..... 305/70R22.5"

Optional ..... Spare wheel

### Suspension and Steering

Electronically Controlled Suspension, independent front suspension. Stabilizers at front, drive and rear axle. Double-acting, hydraulic telescopic shock absorbers, two front, six rear.

Numbers ..... Front . Middle ..... Rear  
 Air bellows ..... 2 ..... 4 ..... 2  
 Levelling valves ..... 2 ..... 2 ..... 2

#### Steering gear

Power steering of ball and nut type with built-in servo unit. Progressive reduction ratio, adjusted steering wheel.

Inner wheel lock angle ..... 38 °  
 Steering wheel diameter ..... 450/500 mm

Optional ..... Kneeling

### Air and Brake system

Separate circuits for front and rear wheels. Volvo disc brakes combined with electronic braking system EBS5, which controls ABS/ASR functions. Electronic Stability Program for yaw control and roll over prevention.

Lining wear sensing and analysis. Available features: brake blending, drag torque control, hill start aid, brake temperature warning, poor brake performance warning, doorbrake.

#### Brake disc diameter:

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

#### Friction area:

Front axle, disc brake ..... 2x200 cm<sup>2</sup>  
 Drive axle, disc brake ..... 2x200 cm<sup>2</sup>  
 Rear axle, disc brake ..... 2x200 cm<sup>2</sup>

System operating pressure ..... 8.5 kp/cm<sup>2</sup>  
 Compressor capacity at 10 bar and engine speed 33 r/s (2000 r/m)

..... 15 dm<sup>3</sup>/s (900 l/m)

Compressor ratio ..... 1.46:1

#### Air tanks standard

- Primary ..... 30 dm<sup>3</sup> (l)  
 - Front circuit ..... 30 dm<sup>3</sup> (l)  
 - Rear circuit ..... 30 dm<sup>3</sup> (l)  
 - Park circuit ..... 15 dm<sup>3</sup> (l)

Compressed air system can easily be filled from external circuit.

#### Handbrake

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

### Vehicle Structure

The frame is made of stainless steel, which offers first-class corrosion resistance. The box-frame construction combines good stability with low weight. The frame is precision-welded to extremely exact dimensions, which is a considerable help in bodybuilding. Flat upper face. Horizontally fitted mid-mounted engine engine makes it possible to have a luggage compartment in the rear. Excellent roadholding and stability. Long service life, increased loading capabilities. The rigid trailer axle allows a higher GVW.

### 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 ..... Datalog Information Center

Optional ..... Radio switches  
 ..... in steering wheel

### Electrical system

The electrical system is a 24-volt system, where the chassis and engine frame are used as a ground. The battery's minus terminal is connected to the chassis via the battery disconnecter. Optional battery box which is placed under the driver's seat, contains two serial connected 12-volt batteries. There are four alternator capacities available.

2nd generation Bus Electrical Architecture (BEA2) with electronic databus system Multiplex 2 for data transmission, bus systems control, monitoring and coordination of all devices installed on the bus. Multiplex 2 also provides diagnostic information for driver and workshop. BEA2 features electronic control of the Engine Management System, transmission and suspension. For testing, callibrating and programming of the control units can be used a PC based software package VCADSPRO. External lighting functions integrated in chassis Multiplex. They are activated by new Light Control Panel and controlled by Light Control Module.

The system is equipped with three main switches: engine shut off, fuel shut off and electrical shut off. Tachograph system is available, analog or digital.

Battery capacity ..... 170, 225 Ah  
 Alternators output ..... 3x80, 3x110 A