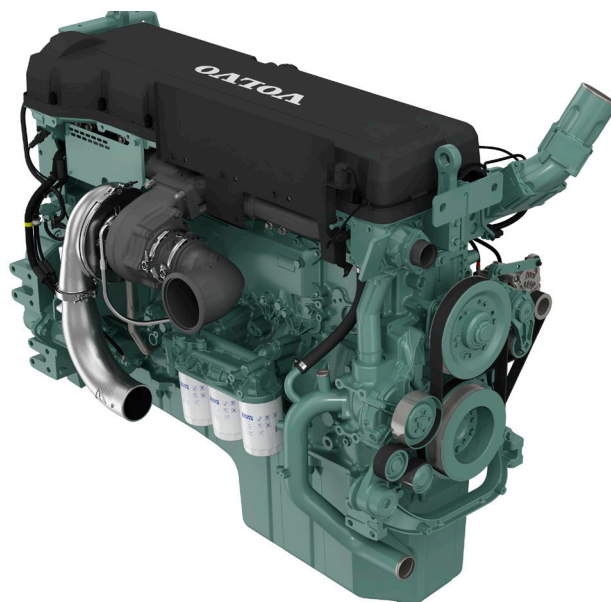


# TAD1650VE-B - 1651VE

16.12 liter, in-line 6 cylinder - 405 & 450 kW  
 UNECE Reg 96 Power band H (equal to EU Stage IIIA)



**TAD1650VE-B-1651VE is a powerful, reliable and economical off-road Diesel Engine range built on the Volvo Group in-line six concept.**

**Low cost of ownership**

World class fuel efficiency combined with high uptime as well as low cost of ownership.

**Compact & simple installation**

As optional equipment all material needed in order to install the engine can be ordered from Volvo Penta. Installation guidelines as well as drawings and CAD models are easy to access. The result is an engine that is easy to install.

**Durability & low noise**

Long experience with base engine development reduces risk of downtime. Well-balanced to produce smooth operation with low noise.

**Power & torque**

Maximum power and torque available at low rpm. As a result noise as well as fuel consumption is very low. Useful engine speed for the TAD1650VE-B - 1651VE is due to power and torque layout very flexible.

**Low exhaust emission**

Efficient injection as well as robust engine design in combination with internal EGR contributes to excellent combustion and low fuel consumption.

**Easy service & maintenance**

Easily accessible service and maintenance points contribute to the ease of service of the engine. As optional equipment possible to remote mount filters and service points.

- Proven and straight-forward design - built on Volvo Group technology
- Low cost of ownership and operation
- High power and torque already at low engine speed
- Compact, simple installation and easy to service
- Similar engine footprint for all emission standards
- High sulfur-in-fuel tolerance
- Wide range of optional equipment

	TAD1650VE-B	TAD1651VE
Power output, kW/hp	405/551	450/612
at speed, rpm	1900	1800
Max. torque, Nm/lb/ft	2757/2033	2897/2137
at speed, rpm	1260	1260

# TAD1650VE-B - 1651VE

16.12 liter, in-line 6 cylinder - 405 & 450 kW  
 UNECE Reg 96 Power band H (equal to EU Stage IIIA)

## Technical data

Engine designation.....	TAD1650VE-B - 1651VE
Configuration and no. of cylinders.....	in-line 6
Displacement, l (in <sup>3</sup> ).....	16.12 (984)
Method of operation.....	4-stroke
Direction of rotation (viewed towards flywheel).....	anti-clockwise
Bore, mm (in.).....	144 (5.67)
Stroke, mm (in.).....	165 (6.50)
Compression ratio.....	17.0:1
Dry weight, engine only, kg (lb).....	1322 (2915)

## Technical description

### Engine and block

- Cast iron cylinder block
- Wet, replaceable cylinder liners
- Replaceable valve guides and valve seats
- Overhead camshaft and four valves per cylinder

### Lubrication system

- Full flow disposable spin-on oil filter, for extra high filtration
- Gear type lubricating oil pump, gear driven by the transmission
- Oil level sensor at startup

### Fuel system

- Electronic high pressure unit injectors
- Fuel prefilter with water separator and water-in-fuel indicator / alarm
- Gear driven low-pressure fuel pump
- Fine fuel filter with manual feed pump and fuel pressure switch

### Cooling system

- Available as power pack or base engine.
- Belt driven coolant pump with high degree of efficiency

### Turbo charger

- Electronically controlled Waste-gate

### Electrical system

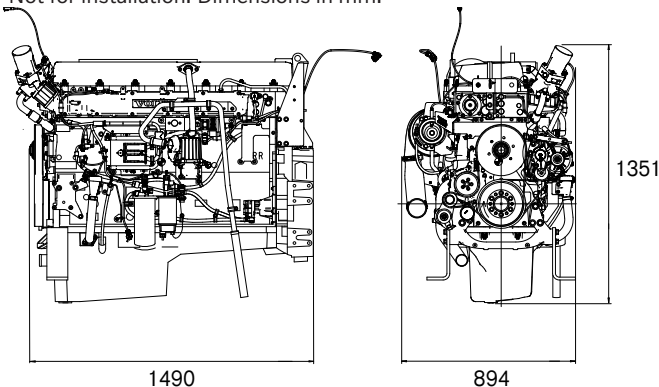
- Engine Management System (EMS), an electronically controlled processing system which optimizes engine performance. It also includes advanced features for diagnostics and fault tracing.
- The instruments and controls connect to the engine via the CAN SAE J1939 interface. Options available for engine control equipment.

### Exhaust reduction system

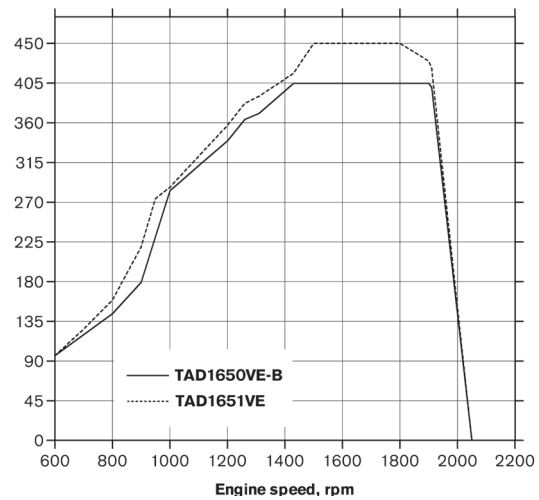
- Without internal EGR

## Dimensions

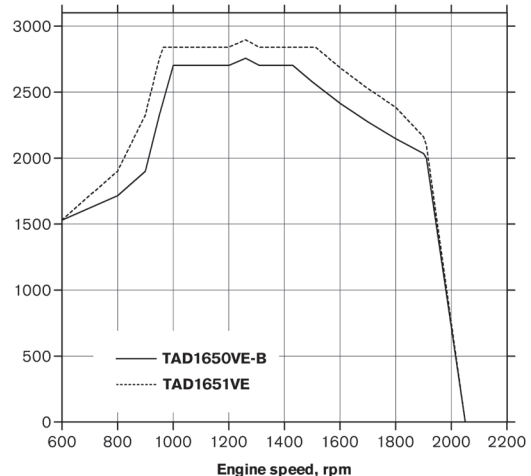
Not for installation. Dimensions in mm.



Power, kW

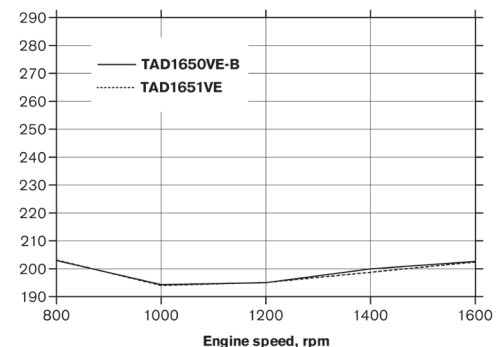


Torque, Nm



## Fuel consumption

Fuel consumption, g/kWh



### Power standards

The engine performance corresponds to ISO 3046, BS 5514 and DIN 6271. The technical data applies to an engine without cooling fan and operating on a fuel with calorific value of 42.7 MJ/kg (18360 BTU/lb) and a density of 0.84 kg/liter (7.01 lb/US gal, 8.42 lb/Imp gal), also where this involves a deviation from the standards.

### Additional information

For additional information, please contact your Volvo Penta representative or visit [www.volvopenta.com](http://www.volvopenta.com).

Not all models, standard equipment and accessories are available in all countries. All specifications are subject to change without notice.

The engine illustrated may not be entirely identical to production standard engines.

**AB Volvo Penta**

SE-405 08 Göteborg, Sweden  
[www.volvopenta.com](http://www.volvopenta.com)