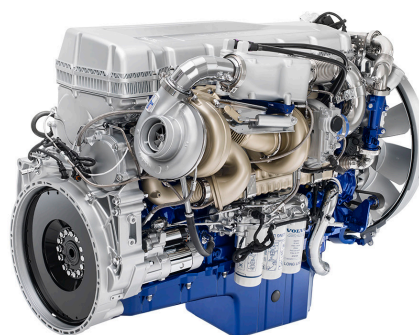
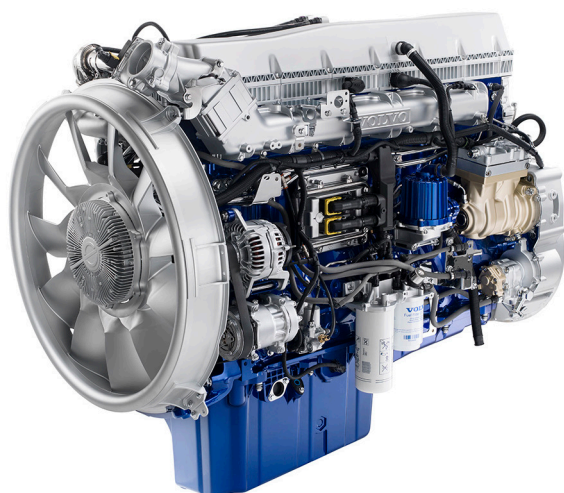




# FACT SHEET

Engine D16K750, EU6DS



**The D16K750 is a powerful 750hp, 16.1-litre, in-line, six-cylinder diesel engine equipped with an overhead camshaft, four valves per cylinder and common rail injection. The engine meets the Euro 6 exhaust emissions requirements.**

The D16K750 is designed for heavy and demanding operations. It is based on a robust and dependable design with an overhead camshaft, four valves per cylinder and accurately controlled electronic fuel injection.

With its extremely high power output, the D16K750 produces impressive torque throughout a broad rev range, resulting in excellent driveability even in very hilly road conditions. Because there is massive torque even at low revs, the engine has excellent low-rev pulling performance.

The D16K750 is a low-emission engine in terms of both exhaust gases and noise. Euro 6 legislation reduces nitrogen oxide (NO<sub>x</sub>) by 80% and particulate emissions by 50% compared with Euro 5. In order to meet legislative requirements, Volvo Trucks has developed an after-treatment system that, in the silencer, combines a Diesel Oxidation Catalyst (DOC), a Diesel Particulate Filter (DPF), a Selective Catalytic Reduction unit (SCR) and an Ammonia Slip Catalyst (ASC).

The Euro 6 engine features a cooled EGR circuit, which helps the after-treatment system by reducing NO<sub>x</sub> emissions from the engine.

Volvo's engines together with the emission after treatment system are highly efficient and are exceeding the legal requirements referred to as Euro 6 Step D version.

The D16K750 can be equipped with VEB+ (Volvo Engine Brake) and EPG (Exhaust Pressure Governor). These systems provide extremely high braking power, further improving safety and reducing wear on the wheel brakes.

## FEATURES AND BENEFITS

- Maximum torque within a broad rev range.
- Fuel efficient.
- Low-emission variant, Euro 6.
- Extremely high engine braking effect with EPG and VEB+ (option).
- Rear-mounted power take-off with high power output (option).
- Extremely clean and environmentally compatible, thanks to two types of closed crankcase ventilation.

# FACT SHEET

Engine D16K750, EU6DS

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## Efficient combustion for excellent driveability

The D16K750 is equipped with a common rail injection system that provide high and precisely timed injection pulses. The combustion chamber and inlet manifold are designed for optimum combustion. The gas-fill ratio is extremely high, which contributes to the high efficiency.

The design creates a fuel-efficient engine with high power and immense torque within a broad rev range. This gives the D16K750 excellent driveability. The torque curve is improved, giving maximum torque at lower revs compared to Euro 5, giving improved driveability and allowing faster rear axle ratios to be used.

## Fulfilling the Euro 6 standard

The Diesel Oxidation Catalyst (DOC) removes hydrocarbons (HC) and carbon monoxide (CO) from the exhaust gases and produces also the nitrogen dioxide (NO<sub>2</sub>) necessary for the Diesel Particulate Filter (DPF) to efficiently combust the particulates.

The Diesel Particulate Filter (DPF) collects particulate matter (PM) until it is burned off by the NO<sub>2</sub> produced by the DOC. If needed, an automatic active regeneration process can also remove PM in the DPF.

In the mixing zone between the DPF and the Selective Catalytic Reduction unit (SCR), the exhaust gases are sprayed with AdBlue, which forms ammonia in the hot exhaust. When the exhaust gases reach the catalyst, the nitrogen oxides (NO<sub>x</sub>) are efficiently transformed into harmless nitrogen gas and water with the help of ammonia.

The Ammonia Slip Catalyst (ASC) is the last step before the tailpipe where any remaining ammonia (NH<sub>3</sub>) is removed.

Hydrocarbon injection into the exhaust pipe is used for keeping the after-treatment system clean and efficient. The diesel that is injected by the so-called 7th injector is combusted in the DOC, which increases the exhaust temperature downstream of the DOC. The hot exhaust gases will remove unwanted substances in the DPF and SCR and thereby ensure the efficiency of those components.

## Low noise emission at idling

The D16K750 meets the relevant noise emission requirements. The crankshaft and camshaft feature hydraulic vibration dampers that minimise noise and vibrations. Pre-injection of fuel is used to further dampen noise at idling.

## Crankcase ventilation

The D16K750 offers a choice of two types of closed crankcase ventilation. The CCV-OX is offered as standard. If using the truck in environmentally vulnerable areas there is also the choice of the CCV-C type, recommended down to -25 degrees Celsius.

Both systems promote an extremely clean and environmentally compatible engine.

## Timing and power take-off at the rear

The engine timing mechanism is located at the rear and drives the power steering pump, oil pump, fuel feed pump and air compressor. It is a compact, quiet and thoroughly sealed design that saves weight. With the timing mechanism at the rear, the engine's cooling is also improved since the flow of incoming cooling air is not obstructed.

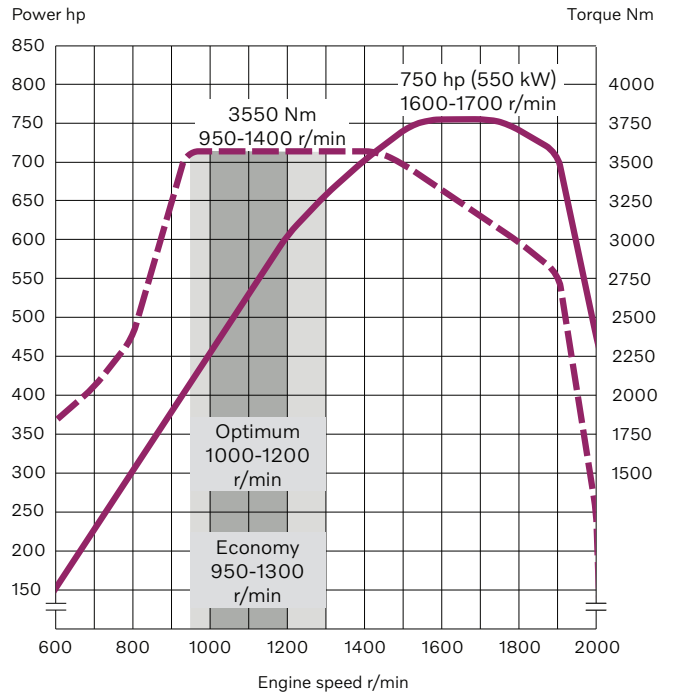
The D16K750 can be equipped with a power take-off designed for propshaft operation or direct-mounted hydraulic pumps. PTO mounting on the engine's flywheel results in a dependable design and permits high torque levels, up to 1,000 Nm in continuous operation.

# FACT SHEET

Engine D16K750, EU6DS

## SPECIFICATION

Type designation ..... D16K750, EU6DS  
 Max power output at 1600–1700 r/min.....750 hp (550 kW)  
 Max revs ..... 2000 r/min  
 Max torque at 950–1400 r/min .....3550 Nm  
 No. of cylinders .....6  
 Bore .....144 mm  
 Stroke .....165 mm  
 Displacement..... 16.1 dm<sup>3</sup>  
 Compression ratio.....16.0:1  
 Exhaust brake power at 2200 r/min .....230 kW  
 Engine braking power (VEB+) at 2200 r/min.....500 kW  
 Economy revs ..... 950–1300 r/min  
 Optimum rev range..... 1000–1200 r/min  
 Oil-change volume incl. oil filter .....approx. 42 l  
 Oil filters ..... 2 full-flow, 1 bypass  
 Cooling system, total volume ..... approx. 48 l  
 Dry weight (base engine) .....approx. 1472 kg



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