

FACT SHEET

ENGINE BRAKE



Engine brake systems

Volvo provides several versions of engine brake systems. The Volvo Engine Brake (VEB), Volvo Engine Brake +, EPG and EPGC.

Sales variants

EBR-VEB+	Volvo Engine Brake +, high efficiency compression brake with exhaust pressure governor.
EBR-VEB	Volvo Engine Brake, compression brake with exhaust pressure governor.
EBR-EPGC	Engine brake with exhaust pressure governor and improved I-Shift compatibility.
EBR-EPG	Engine brake with exhaust pressure governor.



PRODUCTIVITY

- High efficiency braking which allows for higher average speed.



UPTIME

- Reducing wear on service brakes.



ENVIRONMENT

- In combination with cruise control, it helps reduce fuel consumption.

Symbols in the truck



Auxiliary brake symbol.



Stretch Brake symbol. When the truck is equipped with Stretch Brake this function is also available when the auxiliary brake lever is in manual position 1–3.

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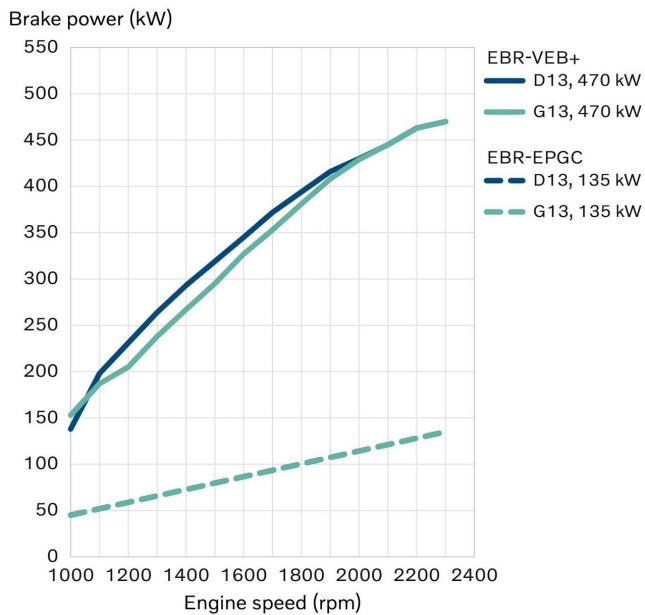
ENGINE BRAKE

Volvo Engine Brake +

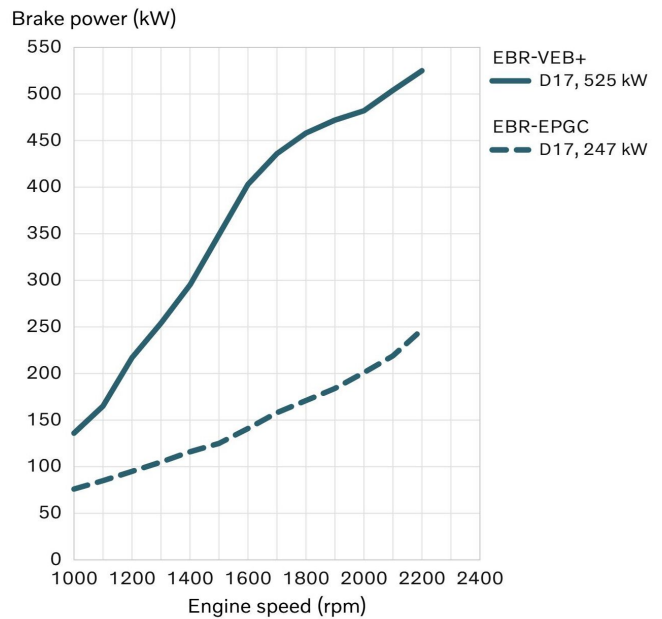
The Volvo Engine Brake + is a refined version of the VEB. With a camshaft with a special profile and two exhaust rocker arms per cylinder, gas pressure can be regulated very precisely. This system makes the Volvo Engine Brake + a highly effective auxiliary brake, both smooth and extremely high braking output.

By using the engine brake, safety can be boosted at the same time as the wheel brake wear is reduced. In combination with cruise control, Volvo Engine Brake + also creates the necessary preconditions for better fuel economy and higher average speeds.

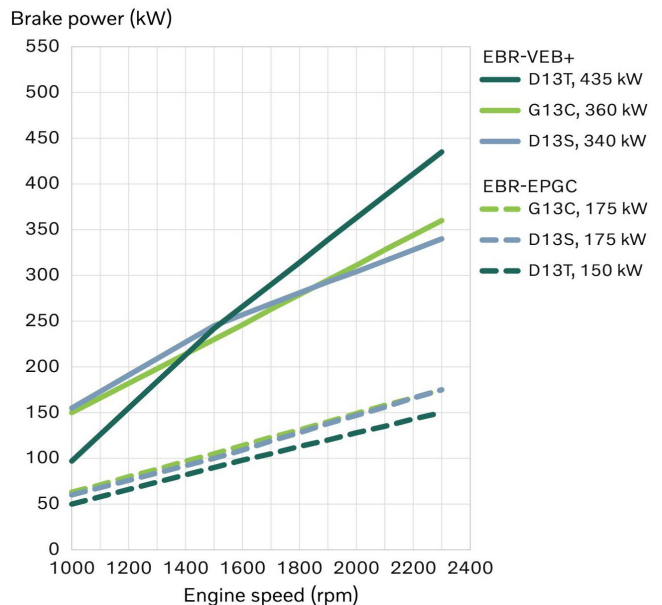
Brake power curves for Euro 6 engines



D13/G13 VGT engines Euro 6



D17 engines Euro 6



D13T, D13S, G13C engines Euro 6

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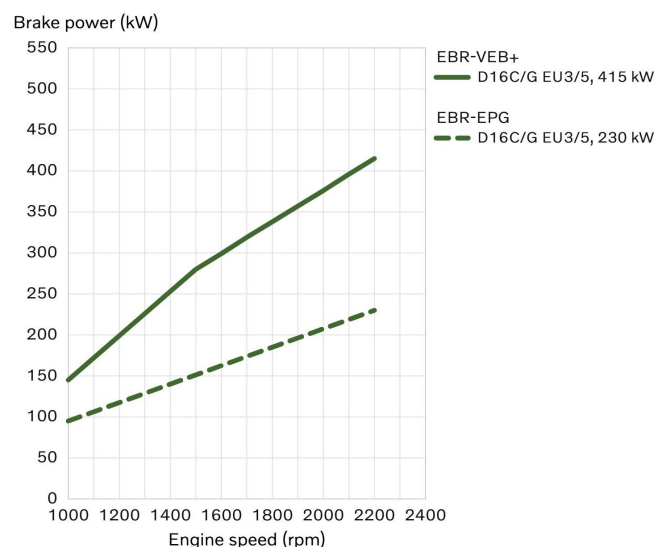
ENGINE BRAKE

Volvo Engine Brake

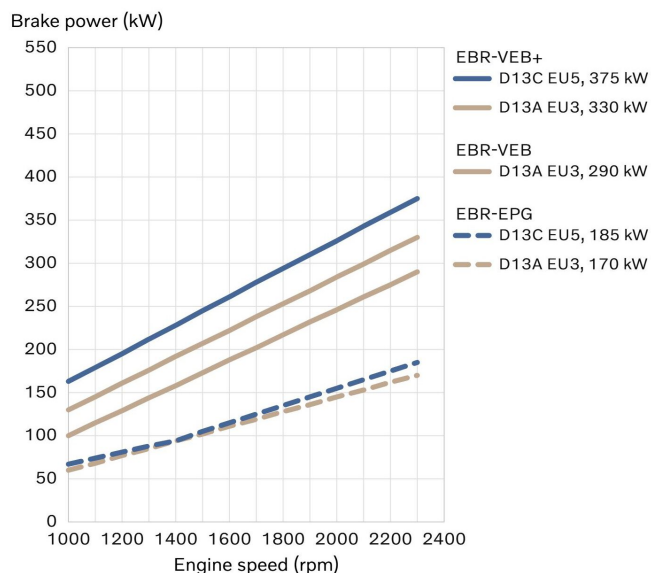
The Volvo Engine Brake combines the Volvo Compression Brake and the Exhaust Pressure Governor in the rpm range that results in an outstanding braking performance.

The Volvo Compression Brake is integrated in the valve system. The special design of the camshaft and the exhaust valve rocker arm makes it possible to govern the braking pressure in the cylinders precisely.

Brake power curves for Euro 3-5 engines



D16 engines Euro 3/5



D13 engines Euro 3/5

EPG and EPGC

The Exhaust Pressure Governor is located in the exhaust outlet of the turbo. EPG is a pneumatic-controlled valve that chokes the flow in the exhaust system.

When the exhaust brake is activated, the valve is almost shut. This gives a high backpressure on the pistons on their way up, which results in a high braking force.

In addition to the standard EPG the EPGC also gets some engine components from the Volvo Engine Brake to facilitate smooth gear shifting.

The EPGC variant is for I-Shift gearboxes and the EPG is mainly for Powertronic gearboxes.