

Explore our Technologies

eTurbo™ (CV)

from BorgWarner



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As a single-machine solution for electrified boost, assistance and recuperation.

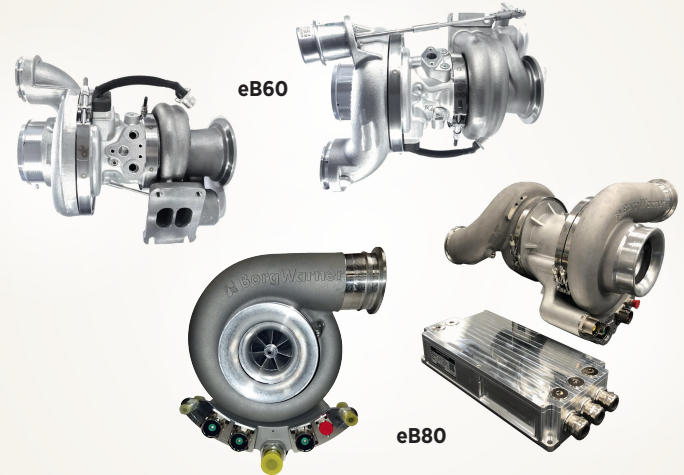
BorgWarner's eTurbo™ offers increased torque at low engine speeds, improved time-to-torque and low backpressure. Precise motor speed control allows for tight Air-Fuel ratio management and Aftertreatment thermal management including conversion of excess exhaust gas energy into electrical power.

Technical Features

- High temperature permanent-magnet motor
- 400 / 800 VDC voltage versions
- Up to 80 KW continuous power
- Up to 110 KW peak power
- Water and oil cooled
- B60-B80 frame sizes
- Corresponding power electronics controller also available

System Benefits

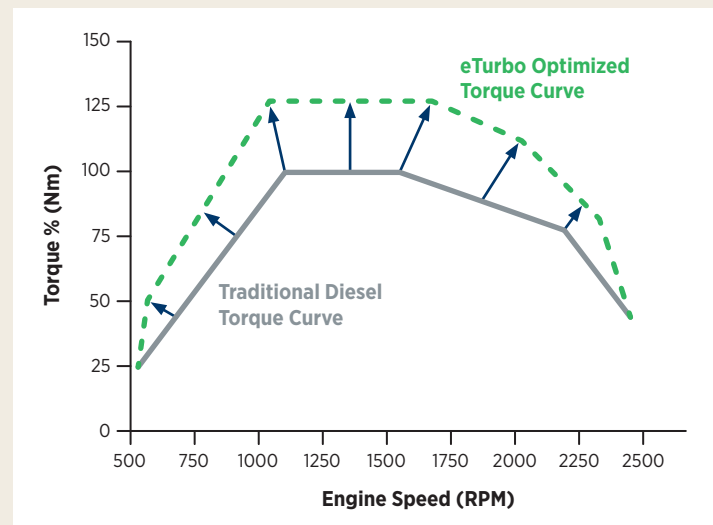
- Responsive direct control of boost and Air / Fuel ratio (with or without VTG)
- Enables significant downspeeding and downsizing without performance penalty
- Transient performance supplemented with motor torque allowing larger turbine match for improved fuel economy
- Excess exhaust gas energy is converted into electrical energy instead of bypassed through the wastegate
- Active map shifting to increase total air system efficiency
- Precise Air-Fuel ratio management
- T4 After-treatment management



Motivation

- Max. rated power and exceptional Low-End-Torque
- 200-700 % Transient boost improvement
- High power density:
Rated power equal to larger displacement engine
- Torque plateau increased in both directions
- Energy neutral over drive cycle. Positive energy possible with smart control
- Downsizing benefits: 25-30 % downsizing
 - Same rated power curve to higher engine speed
 - Same or better peak torque at same or lower speed
 - 30 to 50 % reduction in T90 across engine map

Measurement Results



Find out more about our eTurbo™ (CV) here!

borgwarner.com

 **BorgWarner**