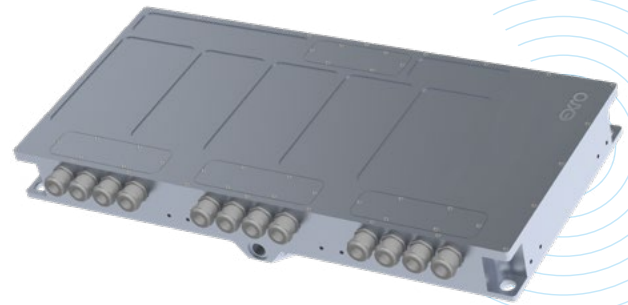




# Coil Driver™ High Voltage 800V Motor Controller

The world's most intelligent electric motor inverter solution.

Exro Technologies' 800V Inverter is an intelligent motor controller, created by the revolutionary Coil Driver™ technology. Exro's patented technology uses intelligent coil switching to optimize the powertrain, enhance torque, improve performance, and reduce cost in heavy duty electric vehicles.



## Unique Advantages

- **Flexibility in system design and reduced cost:** Achieve better or equivalent performance with reduced cost and size for DC link capacitors. Remove the need for a gearbox<sup>1</sup>.
- **Next-level performance differentiator:** Experience significant improvements in motor power and overall performance.
- **Increased torque at low speed:** Gain enhanced startability and gradeability.
- **Enhanced torque at high speed:** Accomplish improved performance and power efficiency at high speed.

## Features

- > Patented technology that enables control of motor configurations
- > Dynamic switching between Series and Parallel modes on the fly
- > Expanded high efficiency range at high speed
- > SiC-based inverter for
  - > Better high frequency switching
  - > Reduced size and weight
  - > Higher efficiency and driving range

## Optimal Applications



Heavy-Duty Trucks



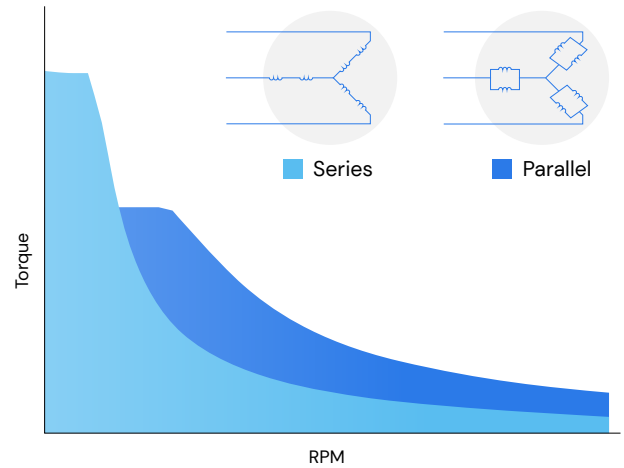
Commercial Vehicles



Municipal Vehicles

## The World's First Coil Switching Drive

Switching automatically and seamlessly, the Coil Driver™ High Voltage (CDHV) selects the appropriate torque profile to optimize the current torque and speed demand. Driving two or more coils per phase, its series mode provides exceptional low-end torque, ideal for acceleration and gradeability, while its parallel mode ensures a more sustained torque output at greater speeds. The ability to switch coils in operation on demand significantly extends the speed and power range of electric motors, making them more powerful, efficient, and intelligent.

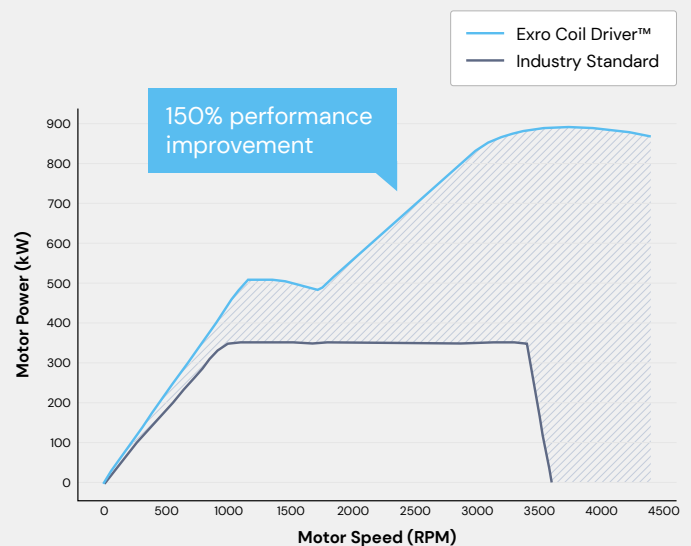
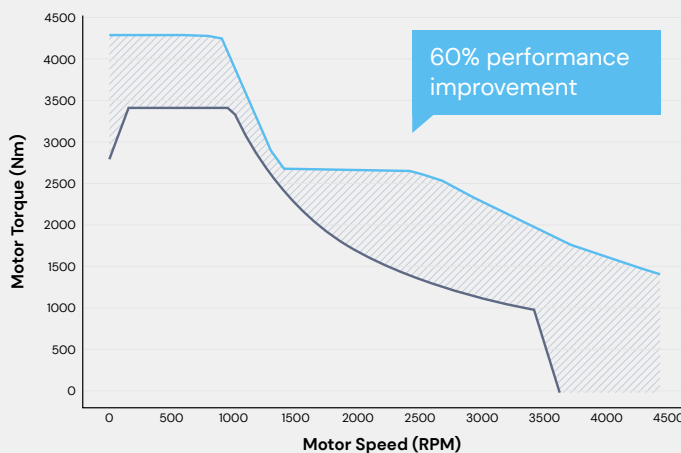


## System specifications

Max DC voltage	1200 V
Peak power	1300 kW
Performance voltage	600–800 V
Peak current (<10 sec)	800 Arms
Continuous current	350 Arms
Peak torque <sup>1</sup>	4300 Nm
Continuous torque <sup>1</sup>	1335 Nm
Dimensions (mm)	855 x 406 x 120
Weight	46 kg
Ingress protection	IP6K9K
Cooling type	Liquid, 50/50 EWG
Coolant flow rate	25 lpm

Coolant pressure drop	25 kpa
Operating temperature (C)	-40 to 60
Control Interface	CAN 2.0b—Programmable (J1939, open)
Component standards	AEC-Q100/AEC-Q101/AEC-Q200/ROHS
Toxic material and flammability	UL94-V0
Functional safety	ISO26262
Automotive quality management system	IATF16949
Automotive electromagnetic compatibility (EMC)	CISPR-25
Shock and vibration standard	GMW3172 sprung masses
CAN controller compliance	ISO11898-1

## Performance<sup>2</sup>



1 Removing the gearbox is dependent on the system configurations and may vary.

2 Torque values and performance curves are based on a system comprised of Exro 800V Coil Driver™ and TSA TMPW 38-26-8 motor.