



## **BorgWarner's High-Voltage Cabin Heating Technology Improves Cabin Comfort for NIO ES8 Electric SUV**

- *Efficient air heating solution quickly warms the cabin for maximum comfort and rapidly defrosts windows for visibility*
- *Double insulation protection leads to a higher dielectric strength*
- *Dual-zone functionality enables precise heating control and high thermal efficiency to reduce energy consumption and extend driving range*

Auburn Hills, Michigan, August 27, 2018 – BorgWarner, a global leader in clean and efficient technology solutions for combustion, hybrid and electric vehicles, supplies its advanced high-voltage positive temperature coefficient (PTC) cabin heating technology for the latest pure-electric ES8 SUV from Chinese electric car maker NIO. The advanced heating solution quickly warms the cabin and defrosts windows for maximum comfort and driving visibility.

“In the booming electric vehicle (EV) market, minimizing the impact from the heating, ventilation and air conditioning (HVAC) system on the driving range of EVs has become a growing challenge,” said Joe Fadool, President and General Manager, BorgWarner Emissions & Thermal Systems. “At BorgWarner, we are constantly developing innovative solutions to increase the efficiency of modern vehicles with all kinds of propulsion systems. We are thrilled to help NIO achieve excellent energy management and maximize cabin comfort with our advanced PTC cabin heating technology. We also look forward to expanding our partnership with NIO in other segments of electric propulsion.”

BorgWarner's PTC cabin heating technology features an enclosed heater rod with a glue-free, pure mechanical press design, which offers excellent heat transfer and reliability. Its double insulation protection can meet 4.3 kV DC dielectric strength. Combined, the heater rod and fin designs provide dual-zone functionality, allowing the precise and quick delivery of individual temperatures for the driver and passengers and eliminating the noise and waste caused by single-zone heaters. The cabin heating system features ceramic PTC components that have very low electrical resistance at low temperatures, facilitating full current flow and high heat delivery. At

high temperatures, the effect is reversed, and less heat is released by shutting down the electricity flow due to the increased resistance of the ceramic stones. Its robust software and hardware protection strategy enables maximum protection against overheating, over-current and over-voltage issues.

BorgWarner provides a broad range of products for electrically driven vehicles, covering four of the five main technology segments for electric propulsion – electric motors, transmissions, power electronics and thermal management. In addition to cabin heater, BorgWarner also supports automakers with products such as eBooster® electrically driven compressors, eGearDrive® transmissions, coolant heaters, auxiliary thermal coolant pumps and high voltage hairpin (HVH) electric motors.

### **About BorgWarner**

BorgWarner Inc. (NYSE: BWA) is a global product leader in clean and efficient technology solutions for combustion, hybrid and electric vehicles. With manufacturing and technical facilities in 66 locations in 18 countries, the company employs approximately 29,000 worldwide. For more information, please visit [borgwarner.com](http://borgwarner.com).



BorgWarner's advanced high-voltage positive temperature coefficient (PTC) cabin air heating technology provides maximum comfort and driving safety for NIO's all-electric ES8 SUV.

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## BorgWarner Inc. (BorgWarner's High-Voltage Cabin Air Heating Technology Improves Driving Comfort for NIO ES8 SUV) – 2

vehicle production, the continued use by original equipment manufacturers of outside suppliers, fluctuations in demand for vehicles containing our products, changes in general economic conditions, as well as other risks noted in reports that we file with the Securities and Exchange Commission, including the Risk Factors identified in our most recently filed Annual Report on Form 10-K. We do not undertake any obligation to update or announce publicly any updates to or revision to any of the forward-looking statements.

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