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Orchid International in cooperation with Rocky Mountain Technologies Inc. announces the launch of its new line of Internal Permanent Magnet Motors (IPM) for electric vehicle traction and wind generator applications. This new motor family is designed to deliver up to 475 Nm at 5,000 RPM in a 9" diameter and 10" long motor with motor efficiencies of 98% over a wide range of operating speed and torque.

The IPM is a hybrid between a permanent magnet (PM) brushless motor and a reluctance motor which avoids the dangerous failure modes associated with conventional PM motors. This motor family is a joint venture between Rocky Mountain Technologies, who supplies the motor design and the drive, Orchid International of Brentwood, TN, who will manufacture this motor at one of their North American facilities, and American Electric Vehicles (AEV), of Palmer Lake, CO, who provides advanced battery technology and who will incorporate this new motor into an advanced drive train for a new production vehicle.

"This line of IPM motors features the highest efficiency and highest power density and will outperform any AC induction motor on the market today in respect to price, power and weight. Especially as the high efficiency allows for simple air-cooling of this motor family at 100 kW of continuous output power in a very small and lightweight package." says George Holling, the Technical Director of Rocky Mountain Technologies.

"We have looked at all existing technologies used for advanced traction drives today, such as copper rotor AC induction motors, and we have concluded that the Internal Permanent Magnet motor and specifically the design from Rocky Mountain Technologies is the best on the market today. We have chosen it to start expanding our products into the market for larger motors and we are excited about its potential" states Craig Woodard, Vice President of Engineering for Orchid International.

"Our customers are demanding that we supply innovative drive trains that incorporate the highest performing and most efficient, cost effective technology. This jointly developed high performance IPM motor was the best choice to supplement our battery and power management technology to meet this challenge and offer our customers a superior electric vehicle drive train. AEV now offers a complete, fully integrated drive train that our customers can source from us with confidence." states Dan Rivers, President of AEV and former Program Manager for General Motors EV-1 program.