



News release

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Parker Ships Record 113 Megawatts of Power Conversion Systems for Energy Storage During 2015

February 15, 2016 – Charlotte, NC - The Energy Grid Tie Division of Parker Hannifin Corporation, the global leader in motion and control technologies, realized shipments of energy storage power conversion systems (PCS) totaling 113 megawatts, bringing cumulative worldwide deployment to over 225 megawatts. The first megawatt-class system went on line in 2008. While the majority of the systems are connected to lithium ion batteries, many successfully linked flow batteries to the grid.

The 890GT-B, a 2 megawatt (2.2 MVA) rated outdoor PCS, accounted for the majority of the high-power installations, with indoor and modular variants covering lower power requirements or facilities that preferred to house the inverters in a building. The addition of outdoor-rated, climate controlled lithium-ion battery containers and full turn-key solutions further contributed to Parker's growth in the market.

"Our modular product design and advanced controls allow us a great amount of flexibility and ability to respond to our customer's specific needs," said Jim Hoelscher, General Manager of the Energy Grid Tie Division of Parker Hannifin. "Additionally, our advanced cooling technology allows for a compact design as well as higher efficiencies than that of conventionally cooled systems."

Installations in 2015 spanned the globe. In North America, Parker installations were concentrated in the PJM market (part of the Eastern Interconnection grid), but significant progress was also made in the MISO (Midcontinent Independent System Operator) and CAISO (California Independent System Operator) territories. Offshore sites included a 16 megawatt system in Korea, 20 megawatts in Chile, with others in Australia, Japan, Germany, Northern Ireland and The Netherlands. Applications include fast-frequency regulation, micro-grid support and roadside vehicle charging stations.

Parker is able to offer a superior energy storage product by leveraging cutting-edge control, HMI and advanced cooling technologies, as well as applied engineering and commissioning and expertise at the system level.

"Parker has a major presence and extensive experience in the renewable energy and power generation market. We understand the needs of all partners, from battery suppliers and EPC contractors to independent power producers and utilities, and what it takes to ensure smooth commissioning, reliable operation and maximized uptime," said Hoelscher. "Additionally, this year, our aftermarket services will be greatly expanded to meet and exceed the expectations of this expanding market. Heading into 2016, Parker is poised to grow in both sales and aftermarket service support sectors."

Visit the Energy Grid Tie Division at www.parker.com/egt for more information on Parker's energy storage products.

About Parker Hannifin Corporation

With annual sales of approximately \$13 billion in fiscal year 2015, Parker Hannifin is the world's leading diversified manufacturer of motion and control technologies and systems, providing precision-engineered solutions for a wide variety of mobile, industrial and aerospace markets. The company employs approximately 55,000 people in 50 countries around the world. Parker has increased its annual dividends paid to shareholders for 59 consecutive fiscal years, among the top five longest-running dividend-increase records in the S&P 500 index. For more information, visit the company's website at www.parker.com, or its investor information website at www.phstock.com.

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