

Power Source Manufacturers of Electric Farm Machinery, Spring 2022

Manufacturer Name	Headquarters	Type of Equipment	Application
Briggs & Stratton	Wauwatosa, Wis.	Lithium-ion batteries	Opened dedicated battery factory in Georgia in 2020.
Cummins	Columbus, Ind.	1. Electric Battery Packs and Modules 2. PowerDrive 3. Battery Electric System (BES) 4. PowerDrive Electric Vehicle Technology	1. Able to integrate with Cummins electric and hybrid powertrains for small and large commercial applications 2. Electric school bus 3. All-electric powertrain compatible with AC or DC charging 4. Portfolio ranging from all-electric powertrains to plug-in hybrid electric
Dana Inc.	Maumee, Ohio	Electrified Modules and Systems for Light Vehicle, Commercial Vehicle and Off-Road Applications	Offerings include high-voltage inverters, ADAS cooling, e-Hub drives, 3e2 e-Gearbox, eRTE32 e-Powershift, e-Axles, motor/inverter system, low voltage inverters, low voltage motors, bi-directional charger inverter, battery cooling plate, battery cold plate, power electronics cooling and controllers
Eaton	Galesburg, Mich.	Low-Voltage Electrical Components	Replace hydraulics on existing agriculture equipment
ELEO	Helmond, Netherlands	Electric powertrain solutions	ELEO advanced modular battery technology for off-road applications
FPT Industrial	Turin, Italy	1. Battery System for City Buses 2. E-Axle 3. Transfer Box	1. Partnership with Microvast Holdings to provide complete battery system for new city and intercity buses by IVECO BUS 2. Delivers power of up to 250 kW and 98% efficiency 3. Adds electric power unit to the original engine, enabling the management of all propulsion modes
Gridtractor (Partially owned subsidiary of Polaris)	California	Fleet electrification services	Startup developing charging technology, fleet electrification and energy management services for electric tractors and heavy farm equipment
Hydro-Gear	Indianapolis, Ind.	Complete electric systems for ZTRs	
JCA Electronics (AGCO)	Winnipeg, Man.	JCA Autonomous Framework JCA AFW Virio	Framework for scalable autonomous systems Runs a virtual terminal through ISOBUS using a tablet
Linamar (MacDon Parent Company)	Guelph, Ont.	1. Fuel Cell Powertrains and Components 2. Flexform Conformable Hydrogen Storage Tank 3. Propulsion Systems 4. Structural and Chassis Components for Electric Vehicles	1. In development for class 1 and 2 vehicles weighing up to 5 tons 2. Type 4 hydrogen tank for vehicles 3. Electric axle systems for light vehicles, commercial vehicles and custom alternative mobility solutions 4. Battery enclosure systems, subframes, subsystems, eAxle cradles
Meritor (Cummins)	Troy, Mich.	14Xe ePowertrain	Powertrain for trailers and trucks
Perkins Engines Co.	Eastfield, Peterborough, England	Hybrid Electric Engines	Hybrid and electric technology for EU Stage V power range from 6-470 kW (8-630 hp)
TE Connectivity	Schaffhausen, Switzerland	Hybrid and electric mobility products	Sensor and connectivity solutions for electric and hybrid vehicles
VARTA AG	Ellwangen, Germany	Battery packs for ag applications	The 3 versions of VARTA's Easy Block lithium-ion battery pack have rated outputs of 16-51.2 ampere hours, voltage of 12.8 -38.4 volts and rated energy of 614-655 watt hours