

# Explore our Technologies

## RES-DCVC125-480 EV DC Fast Charging Power Conversion System (PCS)

for Electric Vehicles



# RES-DCVC125-480 EV DC Fast Charging Power Conversion System (PCS) from BorgWarner

## Medium- and Heavy-Duty Electric Vehicles (EVs) Require More From Their Chargers

Today's medium- and heavy-duty (M/HD) EVs can have storage capacities from 150kWh to over 600kWh. These vehicles need charging systems that have been designed to continuously supply high rates of clean, reliable DC power (60kW to 125kW) on a continuous basis. At BorgWarner, we are experts in the design of high-power electrical systems with exceptional reliability and maintainability for the most demanding applications. We have deployed thousands of our units which are proudly **designed and manufactured in the USA**, with near-zero failure rates.

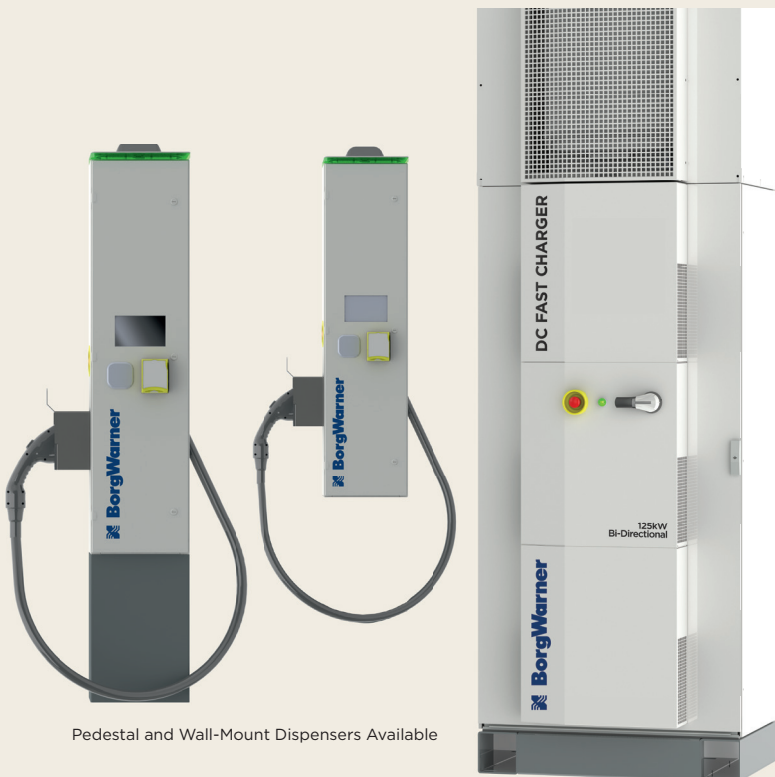
## Solutions That Are Expert-Engineered for V2G-Capable EV Charging

The utility grid's resilience is constantly being challenged, from both weather events and peak loads. Vehicle to grid (V2G) provides the ability to offset peak loads by offering/selling offering excess vehicle energy back to the grid, reducing total energy costs. BorgWarner charging solutions are UL 1741-SA certified, simplifying fleet operator deployment of V2G-capable charging systems for the M/HD EV fleets.



## And If Your Fleet Only Needs Unidirectional Capabilities, BorgWarner Is Still Your Best Option

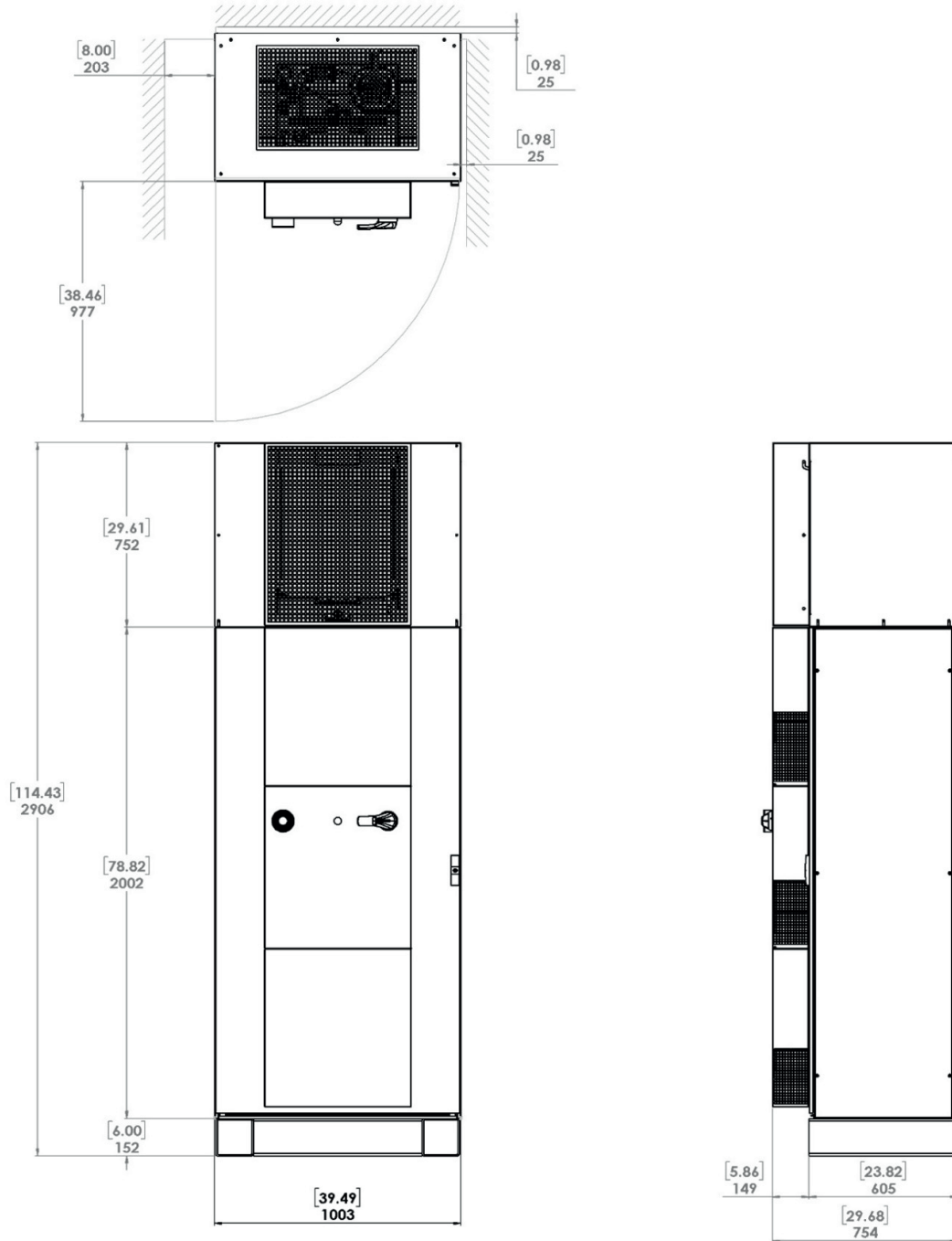
At BorgWarner, we also apply our high-power expertise to the design of our unidirectional DC fast charging solutions for M/HD EV fleets such as school buses, public transit buses, delivery vehicles, refuse trucks, and drayage tractors. Our EV charging solutions are designed specifically for continuous operation at rated loads. These systems are also designed to support the unique needs of EV fleet operators, including the ability to remotely locate the small footprint EV charging dispenser up to 500 feet away from the charger PCS. This allows for optimal site placement in a high density vehicle yards when considering utility power feeds and high density parking.



Pedestal and Wall-Mount Dispensers Available

MODEL	RES-DCVC125-480-V2G AND RES-DCVC125-480
<b>AC SPECIFICATIONS (POWER)</b>	
Bi-directional capable?	YES (RES-DCVC125-480-V2G); NO (RES-DCVC125-480)
Rated Power	125 kW
Utility Grid Voltage	480Vac-3P
Max Rated Utility Current	+/-160A@480VAC/60Hz (V2G), 160A@480VAC/60Hz (non-V2G)
Wiring	3 phase, WYE (L1, L2, L3, Neutral, Gnd.) or Delta (L1, L2, L3, Gnd.)
Utility Grid Frequency	60 Hz
Power Factor Range	+/- 0.5
THD for Linear Loads	<5%
Maximum Efficiency	>95%
Grid Isolation	Galvanic, Integrated
<b>DC OUTPUT</b>	
Maximum Power	125kW
Voltage Operating Range	270Vdc to 920Vdc
Maximum Current	+/-200Adc (V2G Mode), +200Adc (non-V2G); Charging cable limited
Connector and Cable	CCS 1, Up to 8m (25ft)
<b>ENERGY METERING</b>	
AC Energy Meter (Option) / Req. for V2G	+/-1% from 20% to full scale
<b>MECHANICAL</b>	
PCS Dimensions	1000mm x 600mm x 2920mm (39.5" x 24" x 115")
PCS Weight	975kg (2,150 lbs.)
<b>ENVIRONMENTAL</b>	
Cooling	Air + Integrated Liquid Head Exchanger
Environmental Rating	NEMA 3R
Operating Ambient Temp.	-20 °C to 45 °C (-4 to 113°F)
Storage Temperature Range	-30 °C to 60 °C (-22 to 140°F)
Humidity	0 to 95% (non-condensing)
Altitude	De-rated over 2,000m above sea level
<b>COMMUNICATION &amp; CONTROL</b>	
Local Control	Modbus RTU/CAN
External Control & Management	VectorStat® for enhanced diagnostic and energy management.
<b>CERTIFICATION, SAFETY, COMPLIANCE</b>	
Certifications	UL 2202, CSA22.2, IEEE 1547.1 ,UL1741-SA
<b>COMPATIBILITY (MAX DISPENSERS TO PCS RATIO)</b>	
PCS Compatible with Dispenser Model:	RES-D3-CS20 or RES-D3-CS20-V2G

# RES-DCVC125-480 PCS DIMENSIONS



All specifications are configuration dependent and subject to change  
VectorStat® is a registered trademark of BorgWarner Inc.



Find out more about our  
DC Fast Charger here!

[borgwarner.com](http://borgwarner.com)

