POWERED SOLUTIONS

HYDROTEC POWER CUBE

POWER WITH ZERO-TAILPIPE EMISSIONS

Hydrogen fuel cells are a key component of GM's electrification strategy which extends beyond battery-powered passenger vehicles. Fuel cells combine hydrogen and oxygen to generate electricity through an electrochemical reaction. The fuel cell enables the conversion of energy stored in hydrogen into DC electrical power for electric vehicle or supplemental power use. Each HYDROTEC power cube contains 300-plus hydrogen fuel cells along with thermal and power management systems. The power cubes are compact and easy to package and can be used in a wide range of applications, including marine, earth-moving and mining equipment, locomotives and power generators.

HYDROTEC POWER CUBE HIGHLIGHTS

POWER - Provides up to 77 kilowatts of efficient and quiet power.

CLEAN - A zero-tailpipe emissions alternative to diesel engines.

FLEXIBLE - Fits into a wide range of applications, including class 8 trucks, stationary and mobile power generation units, boats, aircraft, locomotive, and other applications.

EASY TO PACKAGE - Compact package allows for more flexible integration solutions.

SERVICEABILITY - Access panels allow for ease of serviceability and can help reduce downtime.

Additional Features

- Can be arrayed in multiple units to achieve higher power ratings
- Over 300 precisely crafted fuel cells and supporting components, all designed to boost performance, efficiency, safety and help ease of integration
- Meets automotive and commercial safety standards, with multiple detection features
- Easy access air, fuel, and cooling connections for integration
- UL / IEC certification (pending)

Preproduction images shown
Visit poweredsolutions.gm.com for additional product information.
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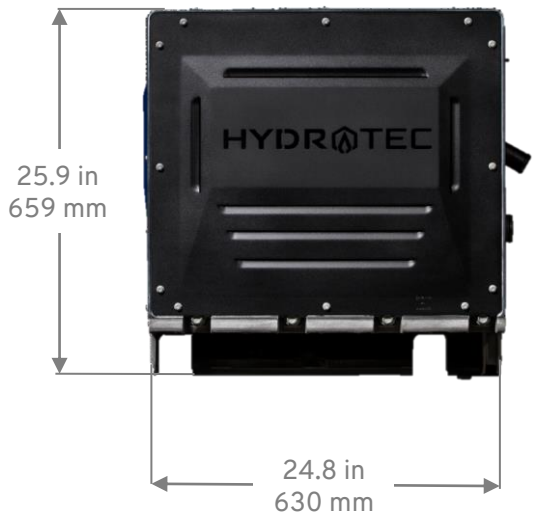
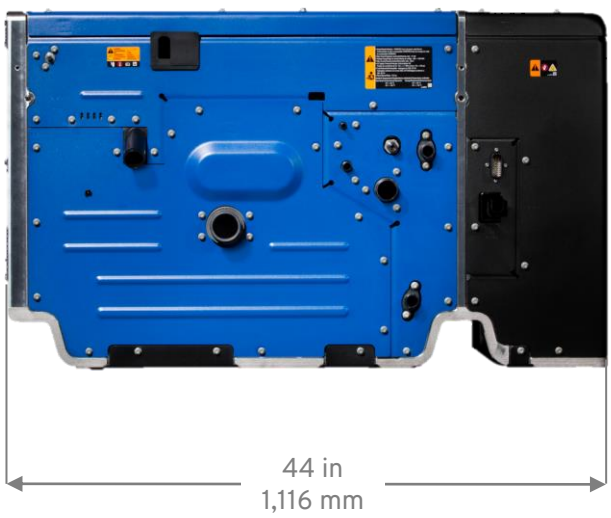
HYDROTEC POWER CUBE SPECIFICATIONS

Performance	
Net peak system power	77 kW
Voltage	486 - 803 VDC (nominal)
Current	158 A max (continuous)
Physical	
Mass 258kg	
Operating temperature	-22° F (-30° C) to 140° F (60° C) (start and run)
Storage temperature	-40° F(-40° C) to 140° F (60° C)
Environmental pressure	62 – 106 kPa
Dimensions LxWxH	44 in x 24.8 in x 25.9 in 1,116 mm x 630 mm x 659 mm
Hydrogen Supply	
Fuel type	Gaseous hydrogen
Pressure	810 - 1100 kPa
Temperature	-40° F (-40° C) to 185° F (85° C)
Coolant and Reactor	
Pressure (high- and low-temperature)	100 – 200 kPa-g
Low-temperature coolant type	EG/DI water solution
High-temperature coolant type	Proprietary solution
Controls	
Control interface	CAN interface, J1939, 500 kbps





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