



# LOCOMOTIVES



## EMD® Joule BE2.4C Battery Powered Switcher

For nearly 100 years, we have produced the most durable, reliable and sustainable locomotive products and services in the rail industry. We design and manufacture locomotives for all commercial rail applications, with more than 65,000 EMD®-powered locomotives delivered to more than 75 countries. Our technology leadership and superior performance drive our reputation for exceptional quality, service and innovation.

Progress Rail is proud to offer its newly developed, fully battery-powered switcher locomotive. The new EMD® Joule is a zero emissions switcher which includes battery capacity from 1.9 megawatt hours up to 2.4 megawatt hours, with additional options available.

The switcher has nominal power up to 3,000 horsepower, and a run time of up to 24 hours, dependent upon charging and utilization.

The switcher's battery recovers energy through dynamic braking. When dynamic braking is activated to control train speed, the battery will restore its energy reserves.

**Progress Rail**  
A Caterpillar Company

**QUALITY. RELIABILITY. INNOVATION.**

Progress moves you forward.

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# EMD® Joule BE2.4C Technical Details



<b>Power</b>	2.140 kW Traction 2.240 kW Total
<b>Tractive Effort</b>	Max 493kN Continuous 441kN
<b>Weight Total</b>	118.105 tons
<b>Axle Load</b>	20 ton/axle
<b>Wheel Arrangement</b>	Co-Co (GFC Bogie)
<b>Max Speed</b>	49.07 mph
<b>Power per Axle</b>	400 kW
<b>Gear Ratio</b>	96:15
<b>Battery Pack Capacity</b>	1.800 kWh
<b>Battery Type</b>	LiFePO
<b>Traction Motors</b>	6 x EMD®-A2909
<b>Air Compressor</b>	Electric Driven Atlas Copco GAR30
<b>Air Brake Controller</b>	Knorr Bremse CCB-II
<b>Dynamic Brake</b>	Regenerative/Blended 2.0 MW, 300kN max
<b>Cooling System</b>	Water Cooled Power Electronics
<b>Control Stand</b>	Standard AAR, Joystick (optional)
<b>Air Conditioning</b>	15.000 BTU, Digital Temperature Control
<b>Options</b>	<ul style="list-style-type: none"> <li>■ Remote Control</li> <li>■ PowerView Event Recorder</li> <li>■ Integrated Cameras to Power View</li> <li>■ Toilet</li> </ul>