



Features

- New or Repower Options Available
- Low noise (<70dB) and vibration
- AC traction with individual axle control
- Regenerative braking
- Inverter-driven auxiliary equipment
- Motor-driven rotary screw air compressor

Suitable Operations:

- Switching/shunting yards
- Regional service
- In consist with diesel-electric locomotives

For 100 years, EMD® has produced the most durable, reliable and sustainable locomotive products in the rail industry. We design and manufacture locomotives for all commercial rail applications, with over 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 the EMD Joule Battery Electric Locomotive series. Available as new build or repowers, EMD® Joule locomotives range in battery capacity from 0.5 to 14.5 MWh to support a wide range of railway operations.

Joule locomotives recover energy through dynamic braking. When dynamic braking is activated to control train speed, the batteries are charged, saving what could otherwise be wasted energy. Alternatively the batteries can be charged through our range of wayside charging options tailored to meet operational needs.

Our growing family of zero exhaust emissions locomotives is just one way Progress Rail helps our customers achieve their sustainability goals.

| MODEL NAME | SD70J | SD70J-BB | SD40JR | GT38JB | GT38JC | GT38H |
|--|---------------------|-------------------------|---------------------|-------------------------|-------------------------|--|
| Number of Axles | 6 | 8 | 6 | 4 | 6 | 6 |
| Power for Traction | Up to 3.2 MW** | Up to 5.7 MW | 2.0 MW | 1.5 MW | 2.91MW | 2.2 MW (1,700 kW Diesel + 550 kW Battery) |
| Tractive Effort: | | | | | | |
| Starting | 200,000 lb / 890 kN | 225,000 lb / 1000 kN | 135,000 lb / 600 kN | 87,281 lb / 388 kN | 121,400 lb / 540 kN | 111,280 lb / 495 kN |
| Continuous | 175,000 lb / 779 kN | 180,000 lb / 800 kN | 93,500 lb / 416 kN | 66,050 lb / 294 kN | 92,172 lb / 410 kN | 90,373 lb / 402 kN |
| Weight, Total | 428,000 lb / 194 mt | 540,000 lb / 245 mt | 353,000 lb / 160 mt | 236,000 lb / 107 mt | 308,560 lb / 140 mt | 246,000 lb / 112t |
| Wheel Arrangement | C-C | B+B-B+B | C-C | B-B | C-C | C-C |
| Maximum Speed | 75 mph / 120 km/h | 50 mph / 80 km/h | 50 mph / 80 km/h | 50 mph / 80 km/h | 50 mph / 80 km/h | 37 mph / 60 km/h |
| Gear Ratio | 83:16 | 85:16 | 96:15 | 85:16 | 96:15 | 96:15 |
| Battery Capacity (max.) | 2.4-8.0 MWh | 14.5 MWh | 4.0 MWh | 4.0 MWh | 4.0 MWh | .55 MWh |
| Dynamic Brake Effort (max.) | 105,000 lb / 467 kN | 135,000 lb / 600 kN | 67,500 lb / 300 kN | 59,125 lb / 263 kN | 67,500 lb / 300 kN | 56,425 lb / 251 kN |
| Track Gauge | Standard | Standard, Narrow, Broad | Standard | Standard, Narrow, Broad | Standard, Narrow, Broad | Standard, Narrow, Broad |
| Dimensions | | | | | | |
| Length Over Coupler Pulling Faces | 74' 3" / 22,631 mm | 78' 8.9" / 24,000 mm | 68' 10" / 20,980 mm | 64' 7" / 19,685 mm | 58' 11.5" / 17,970 mm | 64' 1.3" / 19,540 mm |
| Truck Wheel Base | 13' 4" / 4,064 mm | 6' 3" / 1,905 mm | 13' 7" / 4,140 mm | 9' 0" / 2,743 mm | 6' 4.77" / 1,950 mm | 6' 4.77" / 1,950 mm |

** Depending on battery capacity selected

