



## EUROLIGHT DIESEL-ELECTRIC LOCOMOTIVE

Administrador de Infraestructuras Ferroviarias (ADIF), Spain

In October 2019, Stadler, in consortium with Erion, signed a contract with ADIF for the supply of 22 EUROLIGHT locomotives and their maintenance for a period of eight years. In 2022, ADIF executed the option for 6 additional units. The locomotives are intended for service on standard gauge (1,435 mm) high-speed railway lines carrying out line inspection, stranded train rescue operations, snowploughing and transporting maintenance trains. They can operate in all weather conditions between +45°C and -25°C. In November 2022, ADIF awarded Stadler another order for 12 Iberian gauge (1,668 mm) EUROLIGHT locomotives and 3 metric gauge (1000mm) locomotives.

ADIF's EUROLIGHT locomotives are diesel-electric Bo'Bo' locomotives with 2,800kW engine power and AC traction system with IGBT. They comply with all European standards on safety, emissions and environmental protection. Characterised by their high power, light weight, high hauling capability and low operating costs, they enable the infrastructure manager to offer a wide range of services to railway operators. The locomotives are fitted with two cabs, ETCS and ASFA signalling systems, GSM-R and Train-to-Ground communication systems and GPS. They can reach a maximum speed of 160 km/h.

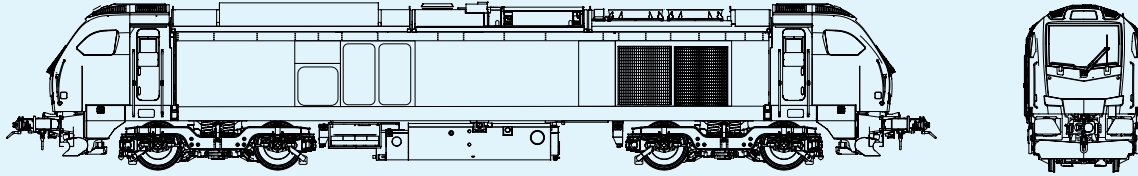
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## Technical features

### Technology

- Applications: railway line inspection, rescue work, snow ploughing and maintenance support
- Efficient alternating drive system with IGBT, one inverter per axle
- Disc brakes
- Electric brake energy recovery for auxiliaries
- Lightweight, monocoque structure made of high strength steel
- Multiple traction: up to 2 locomotives (WTB)
- Innovative adhesion control system
- Signalling systems: ETCS and ASFA Digital
- Communication systems: GSM-R and Train-to-Earth
- GPS global positioning system

### Comfort / Personnel

- Two air-conditioned, acoustically and thermally insulated driver's cabs
- Ergonomically designed central driver's desk
- High levels of comfort, safety and visibility in the cab

### Reliability / Availability / Maintainability / Safety

- Based on subsystems and components from proven models such as the UKLIGHT locomotive
- Reduced fuel consumption. Including energy-efficient systems such as AESS and EFITren
- EC 26/2004 Stage V emissions compliance
- TSI compliance
- Modular design with removable roofs for ease of maintenance
- Video surveillance system with rear-view cameras
- LED interior and exterior lighting

## Vehicle data

<b>Customer</b>	ADIF	
<b>Operation area</b>	Spain	
<b>Number of vehicles</b>	28	12
<b>Commissioning</b>	2023	2025
<b>Track gauge</b>	1,435 mm	1,668 mm
<b>Axle arrangement</b>	Bo'Bo'	
<b>Locomotive type</b>	Diesel-electric	
<b>Diesel engine</b>	CAT C175-16, Stage V	
<b>Diesel engine powerl</b>	2,800 kW	
<b>Transmission</b>	AC/AC	
<b>Starting tractive effort</b>	333 kN	
<b>Continuous tractive effort</b>	256 kN	
<b>Fuel tank</b>	5,000 l	
<b>Urea tank</b>	500 l	
<b>Coupler</b>	Hybrid DAC type 2	
<b>Maximum speed</b>	160 km/h	
<b>Minimum curve radius</b>	150 m (in operation) 80 m (in depot)	
<b>Wheel diameter (new)</b>	1,100 mm	
<b>Brake system</b>	Mechanical: pneumatic Dynamic: rheostatic	
<b>Suspension system</b>	Primary: coil springs Secondary: coil springs Vertical and horizontal shock absorbers	