



**Ural  
Locomotives**

**СІНАРА**

**SIEMENS**

**QUALITY  
FROM  
THE HEART  
OF RUSSIA**



CLASS  
**2ES10**  
FREIGHT DC  
LOCOMOTIVE  
ULKM.RU



Type	Freight	Freight
Voltage	DC	DC
Traction Motor Suspension Type	Nose-suspended	Nose-suspended
Pantograph Rated Voltage, kV	3	3
Track Gauge, mm	1,520	1,520
Axle Arrangement	2(Bo'Bo')	3(Bo'Bo')
Design Speed, km/h	120	120
Axle Load (static), kN	245	245
Adhesive Weight at 0.7 Sand Capacity, t	200 ± 2	300 ± 2
Maximum Shaft Power, kW	8,800	13,200
Max. Starting Tractive Effort, kN	784	1,176
Continuous Shaft Power, kW	8,400	12,600
Continuous Tractive Effort at 55 km/h, kN	538	807
Continuous Tractive Effort at 80 km/h, kN	370	555
Max. Tractive Effort at 120 km/h, kN	236	354
Regenerative Braking Shaft Power, kW	8,400	12,600
Braking Power. Electric Dynamic Brake, kW	5,600	8,400
New Wheel Tread Diameter, mm	1,250	1,250
Service Life, years	40	40

## POWER AND RELIABILITY FROM THE URALS FOR YOUR NEEDS

- The 2ES10 dual-section freight DC locomotive can haul 9,000 t. trains on gradients of up to 6 ‰ and 6,300 t. trains on gradients of up to 10 ‰.
- The 2ES10 Booster Section has been designed to haul extra heavy trains on steep gradients.
- SIEMENS-supplied asynchronous traction drive with axle-specific torque control with IGBT-based traction converters for higher torque.
- MPSUiD microprocessor-based control system with automated train driving, diagnostics, data transmission via radio communication channels, data recording, and GPS/GLONASS tracking.
- Advanced BLOC safety system ensuring the safest driving.
- Multiple-unit/single-section operation.
- The new improved modular-type driver cab.

## SAVING YOUR TIME AND COSTS

- High maintainability thanks to modular equipment arrangement
  - Maintenance intervals increased fivefold\*
  - Specific energy consumption for train traction reduced by 8 - 10 %\*
- \* compared to electric locomotives fitted with commutator traction motors

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