

THE LOK



The “LOCOTRACTOR” model LOK is a rail/road Diesel vehicle in accordance to latest CEE rules among which both antipollution and antinoise ones, whose extraordinary versatility cuts down the time taken for rail movements.

LOK can be on road and off-tracked at any point, even in strict areas, in one easy and quick manoeuvre. This vehicle can also cross rails to make cross-terminal movements quickly and efficiently.

LOK can be transported easily on highway trucks, on railway freight wagons as it conforms to European clearance gauges.

Components used in its manufacture are of well-known international makes, and spare parts are easily available.

LOK guarantees higher performances than traditional shunting locomotives, notwithstanding its lower weight and dimensions.

LOK 6.110

DRAW BAR PULL: 70 kN

MAX TOWING/PULLING CAPACITY: 1400 t*

ENGINE: 82 kW, 110 HP

MAX SPEED: 25 km/h (limited)

WEIGHT: 16 t

DIMENSIONS (LxWxH): 4800x2500x3400 mm

GAUGE: 1435 mm

*max capacity on flat, straight and dry rail

LOK 6.110 Standard Description

ENGINE: CUMMINS, Tier 3/Stage IIIA, Turbo Diesel Intercooler, 4 cylinders, water cooled, total displacement 4,5 liters, rated power 82 kW (110 HP) at 2.500 rpm, maximum power 86 kW (115 HP) at 2.300 rpm, max torque 488 Nm at 1.500 rpm.

As option: CUMMINS, Tier 4(i)/Stage IIIB, Turbo Diesel Intercooler, 4 cylinders, water cooled, total displacement 4,5 liters, rated power 82 kW (110 HP) at 2.200 rpm, maximum power 86 kW (115 HP) at 2.000 rpm, max torque 489 Nm at 1.500 rpm.

As option: CUMMINS, Tier 4(f)/Stage IV, Turbo Diesel Intercooler, 4 cylinders, water cooled, total displacement 3,8 liters, rated power 82 kW (110 HP) at 2.500 rpm, maximum power 82 kW (110 HP) at 2.500 rpm, max torque 415 Nm at 1.600 rpm.

As option: CUMMINS, Tier 4(f)/Stage V, Turbo Diesel Intercooler, 4 cylinders, water cooled, total displacement 3,8 liters, rated power 90 kW (121 HP) at 2.500 rpm, maximum power 91 kW at 2.200 rpm, max torque 500 Nm at 1.500 rpm.

TRANSMISSION: Powershift DANA SPICER (CLARK), assembled on block to the thermal engine, 3 forward gears + 3 reverse gears with torque converter, semi-automatic electric gear control with anti-inversion safety device.

AIR FILTER: DONALDSON with double cartridge and electric clogging indicator.

FRONT AXLE: Heavy duty, steering type, double reduction, with gleason differentials and epicyclic final drive on the wheels.

REAR AXLE: Heavy duty, double reduction, with gleason differentials and epicyclic final drive on the wheels.

SUSPENSIONS: Front and rear suspensions with semi-elliptic leaf springs, width 100 mm.

DRIVING: DANFOSS hydrostatic type, acting on the front wheels through 2 double-effect hydraulic cylinders, oil tank with filter hydraulic gear pump assembled on the engine.

BRAKING: With 2 independent hydraulic circuits, one on the front and one on the rear axle, hydraulic pump flanged on the engine, 3 safety accumulators able to effect 6 full powered brakes even if the hydraulic pump is out of order. 4 disc brakes diameter = 416 mm with 4 calipers on the front axle and 4 calipers on the rear axle, brake pads with wear and tear indicator.

HAND BRAKE: Mechanical type with negative acting, antagonist spring, working on an independent disc assembled on the transmission.

WHEELS: Pneumatic interchangeable tires 9.00-20.

BODY WORK: Monobloc type, made of thick sheet-steel making a unique ensemble with the chassis, of a great strength.

CABIN: Metallic cabin, completely closed and assembled on "Silent block", wide and stratified windscreen with safety sliding glasses. Rear glass with heater, unique rear door, 2 sun-protecting tongues, green antiglare strip, heating and summer ventilation.

ELECTRIC SYSTEM: 24 Volts with 2 batteries of 12 V, 120 Ah each one, which don't need any maintenance service. Alternator 80 A, 24 V.

RAILWAY AXLES: Lifting and floating type, with wheels with a diameter of 400 mm in steel, assembled on conical bearings.

FUEL TANK: Metallic type having a capacity of 250 liters.

STONECATCHERS: Installed on the front of rail wheels with adjustable height.

EMERGENCY BUTTONS: Installed on the 4 sides of the vehicle and managed by an independent circuit with safety relays.

ZEPHIR TRACTION ANTISLIP SYSTEM

OPTIONS

Operator remote control (rail mode only) with dedicated receiver / battery charger and spare battery

Ground operator safety remote control with dedicated receiver / battery charger and spare battery

THEIMEG TECH/LO remote control according EN50239 (SIL3)

Interlock safety remote control system (4 channels) including transmitter (installed on UWL) and receiver (on board the machine)

Interlock safety remote control system (9 channels) (bi-directional for UWL) including transceiver installed on UWL and transceiver on board the machine

Different rail gauge measures

In-railing video camera system (1 monitor and 2 video cameras)

Video camera system for coupler (available only with in-rail video camera system)

Pre-arrangement for coupler supplied by the customer

ZEPHIR automatic coupler

Hydraulic slide

Hydraulic slide with UIC hook

AAR coupler (small type)

Tow bar

Semi permanent bar

Double hoses

Electric winch

4 steering road wheels system

Pneumatic braking system with 1540 liters/minute air compressor

Pneumatic braking system with 2200 liters/minute air compressor

Sanding system

On-rail presence magnetic sensor

Rail track short-circuiting signalling system (permitting the visibility of the vehicle for the control/safety systems)

COMFORT RIGHT: comfort steel cabin with rear door, heating and summer ventilation, driver seat on RIGHT side ONLY (D62dx)

COMFORT LEFT 180: comfort steel cabin with rear door, heating and summer ventilation, driver seat on LEFT side with second driver seat turned 180° on RIGHT side with rail commands only (D61sx+180dx)

COMFORT RIGHT 180: comfort steel cabin with rear door, heating and summer ventilation, driver seat on RIGHT side plus second driver seat turned 180° on LEFT side with rail commands only (D62dx+180sx)

LUXURY LEFT: thermal and acoustic polyester lining fabric, electrical sideview mirror with heater, rear window wiper, documents binder, fiberglass headlight support, fiberglass remote control cover, and bottle and glasses holder on LEFT side ONLY (C83sx)

LUXURY RIGHT: thermal and acoustic polyester lining fabric, electrical sideview mirror with heater, rear window wiper, documents binder, fiberglass headlight support, fiberglass remote control cover, and bottle and glasses holder on RIGHT side ONLY (D60dx)

LUXURY LEFT 180: thermal and acoustic polyester lining fabric, electrical sideview mirror with heater, rear window wiper, documents binder, fiberglass headlight support, fiberglass remote control cover, and bottle and glasses holder, driver seat on LEFT side plus second driver seat turned 180° on RIGHT side with rail commands only (C83sx+180dx)

LUXURY RIGHT 180: thermal and acoustic polyester lining fabric, electrical sideview mirror with heater, rear window wiper, documents binder, fiberglass headlight

support, fiberglass remote control cover, and bottle and glasses holder Driver seat on RIGHT side plus second driver seat turned 180° on LEFT side with rail commands only (D60dx+180sx)

In-cab central rear view mirror (external left and right mirrors are included in std configuration)

Air conditioning system inside cabin

Passenger seat

Electro-pneumatic passenger seat

Electro-pneumatic driver seat

Transceiver predisposition only (12V, 10Ah, negative ground) with fuse

Arctic Pack: electrically heated driver seat, kit special oils, hydraulic oil heating, extra heater in the cabin, heating of critical components (valves, electronic comps, etc)

Comfort pack: electrically heated driver seat, speed cruise control, triple speed limiter with extractable key control

SPF Soot Particulate Filter

Engine as per European std TIER-4i

Engine as per European std TIER-4f

Over pressure control system (included when machine is equipped with operator remote control)

Multi-unit system for connection of two vehicles in master-slave configuration

Customized painting

Hydraulic engine cover lifting system

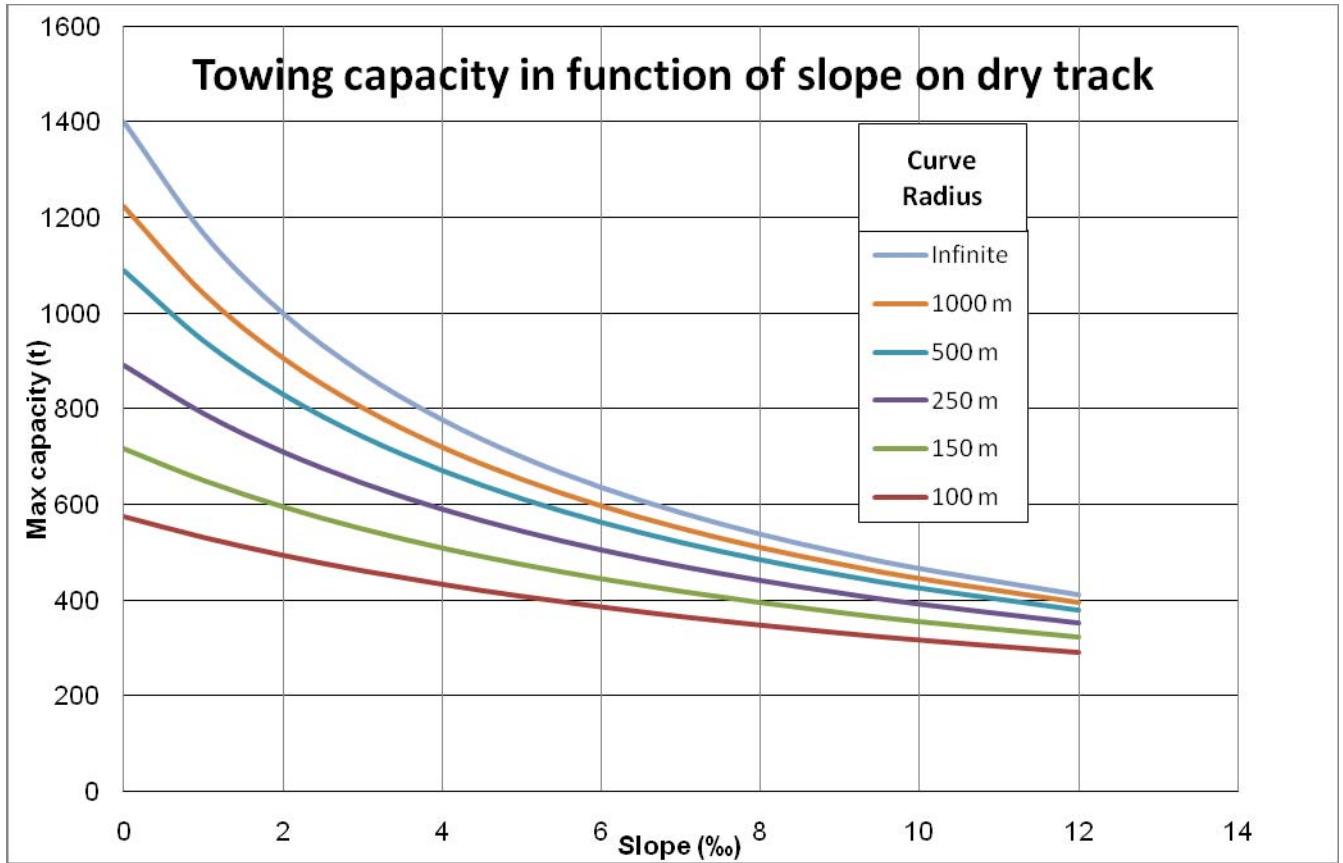
4 RUD lifting eyes

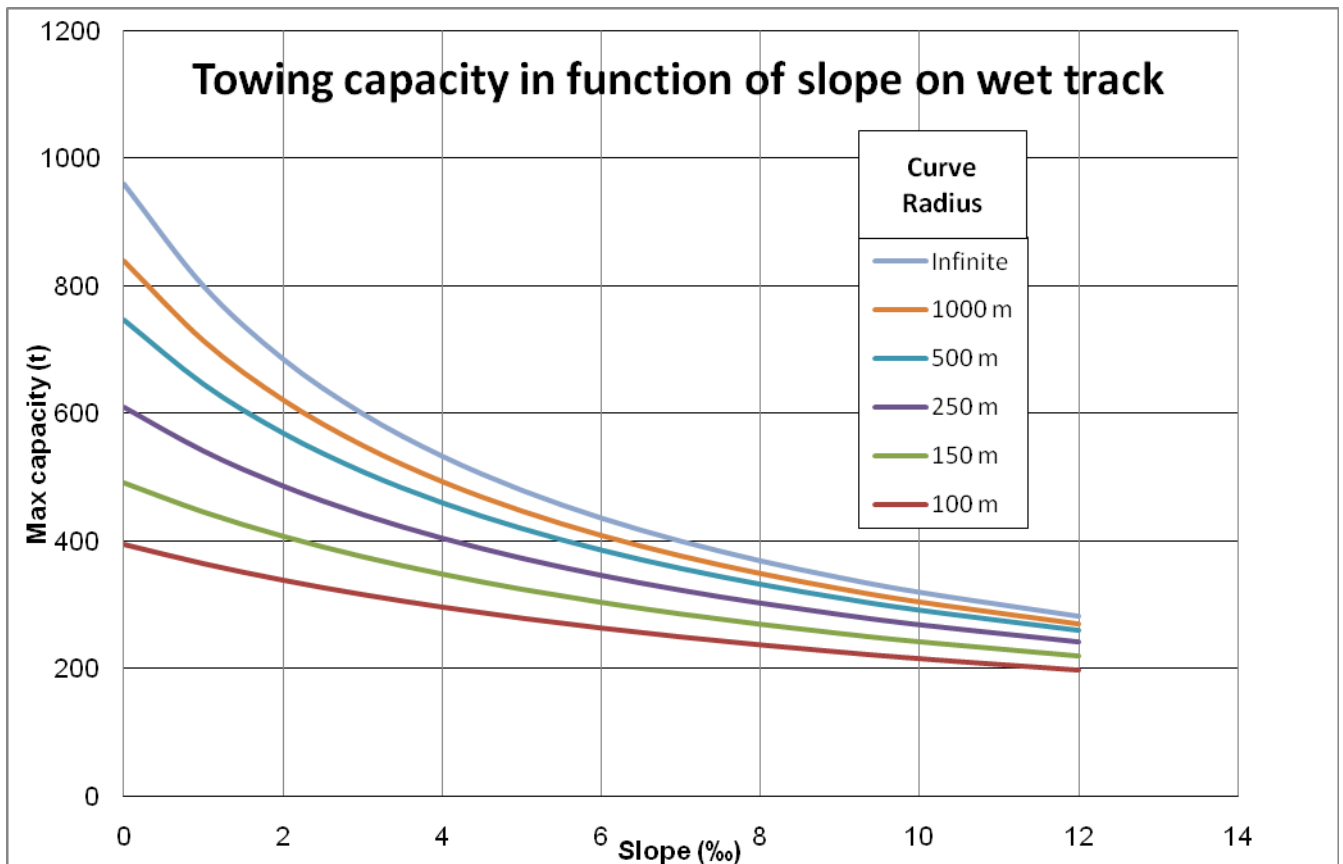
Rescue kit: RUD lifting eyes, two emergency screws for rail boogie positioning, special flexible hose for emergency pneumatic connection

Spare wheel (Rim + tyre)

Additional Trojan refilling

Other options available on demand





REFERENCE PARAMETERS USED FOR THE DIAGRAMS

Rolling Resistance
5 [kg/t]

Slope Resistance
1 [kg/t] per 1 ‰

Curve Resistance
 $750/\text{radius [m]}$ [kg/t]

Dry Track Rail Wheels Friction
72%

Wet Track Rail Wheels Friction
40%