



TRENS
SOLAR TRAINS

Introducing the Lean & Green Road Train



**Visitors expect the best!
So, why not offer the best?**

The Solar Powered People Mover

This Solar Powered Road Train is designed for smooth, comfortable and silent transport of people and for distribution of goods.

The state of the art innovative techniques in solar panels, batteries and the unique suspension system for electric drivelines, result into a 100% electric people mover with comfortable seats for 60 passengers.

Advantages for crowded City Centers when implementing the slim and flexible electric solar train:

- Transit capacity of the city increases
- City's transit network is extended
- New flexible transit options evolve
- Excessive costs are avoided!

No special infrastructure is required while maintenance costs are nearly negligible!

The operating range of the Solar Road Train is at least 100Km per day on a single battery charge. The battery capacity can even be tripled to fulfil specific city requirements.

Provision is made for urban public transport in the three carriages for 60 sitting passengers and 30 standing passengers.

All passengers are drawn comfortably by the solar powered trailer at a speed up to 40km/h, irrespectively of climbs.

Environmental topics

No CO₂ output Prevented: ± 28.000 Kg CO₂-emission per train per year

Sustainability Recyclable materials

Warranty During 2 years of operations on production and assembly failures



100% Electric
100% ECO-friendly

Commuters

Leisure

Tourists

Distribution

The Multifunctional Solar Powered Road Train

City visitors	Connection between parking area/P&R-facilities and City Centers
Tourists	Tours on boulevards, historical sites and inner city
Leisure	Environmental zones, event and theme parks, inner city,
Business	Commuting inner city, municipal affairs and distribution

The Solar Road Train fits in perfectly

Increase the connectivity and capacity of your public passenger transport system, for your valued visitors, tourists, commuters and for the prosperity of your city.

General Characteristics

Train	1 locomotive and 3 carriages
Passenger Capacity	90 passengers
Climbing ability	20%
Turning circle	12 meters
Dimensions (LxWxH)	18 x 1.85 x 2.5 meters
Speed	25 km/h - 40 km/h
Wheel pressure on roads	Max. 800kg
Weight empty	5.900kg (incl. battery)
Weight incl. passengers	9.500kg (incl. battery) average occupancy
Energy Pack	Li-ion (LiFePO ₄) batteries 46 kWh maintenance free
Operating range	100 km ex. Solar power (flat surface)
Solar Panels	for ±25% energy output
Homologation	Fulfilling all demands in European Countries

Locomotive

Driveline	4 x in-wheel gear 11,25:1 + direct attached motors
Electric motor	4 x 25kW 144 Volt PMAC Motors
Vehicle torque	10.000 Nm
Energy Pack	Li-ion (LiFePO ₄) batteries, client/area specific
Remote monitoring	Batteries and electric motor
Brakes	4 x drum brake, hydraulic, air-commanded
Suspension	Independent double wishbone, air-springs
Driver's seat	Fully adjustable, air-spring
Steering	Hydro-Electric power steering
Dimensions (LxWxH)	3.0 x 1.85 x 2.5 meters
Chassis	Galvanized steel
Body	Reinforced Composite
Wheels	Alloy Rims 17 inch
Audio	Standard public address system / driver attention

Carriages

Seats per carriage	20 seats, round-seated or facing forward
Standing area per carriage	10 places for standing passengers
Windows	Front/rear fixed, others downward sliding or none
Steering	4-wheel steering, perfectly following locomotive
Suspension	Independent double wishbone, air springs
Brakes	4 x drum brake, hydraulic, air-commanded
Dimensions (LxWxH)	4.5 x 1.85 x 2.5 meters
Chassis	Galvanized steel
Body	Reinforced Composite
Wheels	Alloy Rims 13 inch
Audio	Standard 2 speakers + attention buttons
Wheel chair access	Easy to operate ramps (option)
Other options	Heating, multi-language audio guide, TV-Screen, wooden or leather upholstery, interior/exterior cameras

Topics

CO ₂ -production	± 28.000kg CO ₂ is prevented per train per year
Sustainability	Recyclable materials
Maintenance	1 x per year inspection and maintenance
Warranty	During 2 years of operation on production and assembly failures

The pros

- No special infrastructure needed
- Minor maintenance costs
- No pollution, no noise
- Elegant, modern and sustainable design
- Passengers experience the best!

The producer Trens B.V., based in Arnhem, the Netherlands, employs engineers with over 15 years of experience in designing and producing solar powered trains.

The state of the art innovative techniques mounted in the new solar powered train assure exceptional performance.

**The Solar Powered Train fits in perfectly.
So, you can offer the best!**



Are you interested?

Please call +316 5115 7018 (Holland)
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SOLAR TRAINS

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In all cases in which we act as offeror or supplier, our offers, assignments given to us and agreements concluded with us are subject to the METAALUNIE TERMS AND CONDITIONS. These terms and conditions have been filed at the Registry of the Rotterdam District Court."

Commuters

Leisure

Tourists

Distribution