



PLine

BUILT IN BRASS

DB railcars ETA/ESA 150 (Akku Trieb Wagen)

A Limited Edition Product

Prototype Information:

This Battery powered Railcar set is modelled on Battery Powered Metre Gauge Railcars of the Duetche Bahn of the German Railways. Each Train consisted of a powered ETA 150 Railcar and a non-powered ESA 150 Railcar.

Power Car ETA:

The ETA 150 battery powered Railcar had cabs at both ends and passenger seats for both Second & First Class passengers. Each ETA 150 would either run as a single car or would be coupled with the non-powered ESA 150 car as a 2 car train.

Non-Power Car ESA:

Like the ETA 150 the ESA non-power cars were also a metre gauge stocks, often being coupled and pulled by the ETA power cars to form a 2 car train. The ESA had no motor or battery pack and would draw its lighting and internal power from the ETA. It generally had seating arrangements for only the second class passengers.

General Description of ETA/ESA Akku Trieb Wagen Set:

The complete Series comprises of the following Cars:

- ◆ Powered ETA 150 Railcar X 1 unit
- ◆ Non-Powered ESA Railcar X 1 unit

ETA 150:

This model is accurately crafted in 1/32 scale (Gauge One), and is of all metal construction (Brass, Steel, Copper and Phosphor bronze). It is powered by 2 Powered Bogies each having an all metal gear drive delivering a gear ratio of 1:36 per bogie. The Bogies are driven by two high speed & torque 16v PM DC motors.

The Model comes painted (in Maroon DB livery) and ready to run either as a Battery powered set suitable for RC. The main power switch is a 2-way toggle switch beneath the front driver's cab on the ETA 150 car. The switch operates in 2 positions, 'off/Charge', and 'on'. To Charge the battery of the Locomotive, turn the 2-way switch to the 'Charge' position, and insert the charger jack in to the charging socket located on the cab's right side (lift up cover) just like the actual prototype.

There are Directional head/tail lights on the Model and are activated when the model moves in any direction. The PLine ETA 150 uses miniature LED's (connected in series) for head/tail lamp illuminations. While the internal roof lights (1.5v grain of wheat lamps) light up constantly, irrespective of the car's movement direction.

Power to the non-powered car can be transferred from the small power transfer socket located underneath the end cab of the ETA.

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ESA:

This model is accurately crafted in 1/32 scale (Gauge One), and is of all metal construction (Brass, Steel, Copper and Phosphor bronze). It has two free-wheeling non-Powered Bogies. The Model comes painted (in Blue/Cream DB livery) and ready to run with the ETA powered cars.

There are Directional head/tail lights on the Model and are activated when the model moves in any direction only when coupled with a ETA 150. The PLine ESA 150 uses miniature LED's (connected in series) for head/tail lamp illuminations. While the internal roof lights (1.5v grain of wheat lamps) light up constantly, irrespective of the car's movement direction.

Power to the non-powered ESA car is transmitted via the extendable power feed jack underneath the ESA's drivers cab, this can be connected to the small socket beneath the end driver's cab on the ETA which supplies the power for the lights to the ESA.

Limited Edition Products:

These Models are Limited Edition Products, and are Individually Numbered (Unique Serial Number). Each model comes fitted with a Photo-etched Brass Builders Plate on its body. Only a limited quantity of these products would be ever produced by us.

Coupler Selection:

Your PLine ETA/ESA 150 Akku Trieb Wagen set, comes ready to fit Marklin type hook & Chain couplers. Alternatively, you can use similar style couplers, readily available from other manufacturers. The couplers can be mounted between the tail lamps inside the pre-formed and cut coupler seats. A total of 4 couplers are required per set.

We do not recommend you try and disassemble these models. Also please take care while lifting the models up. They should always be picked by grasping under the frames on both ends.

Technical Specifications of the NG Diesel Passenger Train Set:

- ◆ Scale: 1/32 (Gauge One)
- ◆ Gauge: 45mm (factory set)
- ◆ Train Set Consists of:

ETA 150 Power car

Quantity: 1 unit

Length: 830mm (over Buffer beams); Width: 95mm; Height: 130mm (above Rail Top);
Weight: 9Kgs. (With batteries).

Motors: 2 X 16v DC PM type (torque 250 gm-cm)

Gear Ratio: 1:36 on each bogie

Control: Suitable for 2.4Ghz RC

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Accessories: RC version- Body mounted Charging socket, Power 'on'/'Charge' switch & power transfer socket

ESA 150 NON-Power car

Quantity: 1 unit

Length: 830mm (over Buffer beams); Width: 95mm; Height: 130mm (above Rail Top);

Weight: 8Kgs. (With batteries).

Bogies: Free-wheeling

Accessories: Power transfer jack beneath drivers cab

- ◆ Couplers: Will take Hook/Chain type Marklin Couplers(not supplied)
- ◆ Paint Scheme: DB Livery (ETA- Maroon; ESA-Blue/Cream)
- ◆ Wheel Dia: 32mm (tread dia);
- ◆ Minimum turning Radius: 2000mm
- ◆ Minimum Side Clearance: 100mm on both sides (measured from inner-rails)

Caution!!

This model has sharp edges and moving parts.

AT ANY TIME, OPERATORS MUST NOT COME IN CONTACT WITH THE MODEL WHILE IT IS RUNNING. UNDER NO CIRCUMSTANCES SHALL Model Engineering Company OR ANY OF ITS ASSOCIATES BE HELD RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING IN REGARD TO ANY PLINE PRODUCT.

Model Features:

These models are handcrafted in brass and painted in the correct scheme.

General:

- ◆ Limited Edition Products
- ◆ The Models are handcrafted in all Brass, with Steel & Delrin parts
- ◆ Detailed body overlays
- ◆ Sprung buffers & wheel bogies
- ◆ Hook & Chain marklin style Couplers (not supplied)
- ◆ Some Windows, are glazed (as in prototype)
- ◆ Photo-etched Brass Builders Plate

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ETA:

- ◆ Directional LED Head & tail Lighting on Motors
- ◆ Internal roof lighting with 'grain of wheat lamp'
- ◆ Photo-etched/cast/machined body details
- ◆ All scale fittings like Handrails, Air horn, vent, ditch lights, footboards, door handles, door latches are turned brass.
- ◆ Windows are glazed
- ◆ Detailed balsa wood interiors and seats
- ◆ Power transfer socket underneath end driver's cab, to take ESA's power feed jack

ESA:

- ◆ Directional LED Head & tail Lighting on ETA's Motors
- ◆ Internal roof lighting with 'grain of wheat lamp'
- ◆ Photo-etched/cast/machined body details
- ◆ All scale fittings like Handrails, Air horn, vent, ditch lights, footboards, door handles, door latches are turned brass.
- ◆ Windows are glazed
- ◆ Detailed balsa wood interiors and seats
- ◆ Power feed jack underneath driver's cab to be connected to ETA's power transfer socket

Operating & Maintenance:

Like any other Engineering masterpiece, there are a few precautions to be taken before you can actually run it on a layout.

Before you start running your models outdoors, you need to lubricate all the moving parts and break the models in.

Lubricating:

Like any other Engineering masterpiece, there are a few precautions to be taken before you can actually run it on a layout.

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Before you start running your model outdoors, you need to lubricate all the moving parts and break it in. This is because the gearboxes and the bushes must be worn in sufficiently to allow smooth running.

ETA powered:

Light oil such as Labelle #108 or Hoppe's Gun Oil would be good enough for lubricating most of the moving parts. For gears use a suitable gear grease such as Permatex Super Lube or another hobby gear lubricant.

The gear boxes in the Power Bogies have 'lift-up' lids to cover the worm & wheel arrangements, which can be lifted using a fine flat blade screw driver and the worm-wheel should be greased. Do replace the 'lift-up' lids back in position once the worm-wheels are greased (the 'lift-up' lids are primarily shipped from the factory with a small tab of soft solder to lock them in place, this can be removed with a soldering iron or sharp scraper tool). The bigger gears can be lubricated by applying grease on the gear teeth using a small screw driver. The main gear box is lubricated in the factory and will not need any attention when you run your model for the first few months. However, in time, you should make sure that the gears are well lubricated with suitable gear grease.

To access the many moving parts of this model it is best to carefully place it on its side on a soft towel or foam sheet. A drop of light oil on every moving part is necessary, and there aren't many on this locomotive. Use oil that is a bit heavier to lubricate the axle bushings and pivot points of the Power Bogies. Each Model is provided with Oiler holes on the Axle boxes of each wheel. Use a few drops of Lubricating Oil to lubricate each Axle end. Also apply a drop of Lubricating Oil at the base of the pivot bolts (space between the Delrin washers and the outer side of the dummy weights) that attach the wheel bogies to the Chassis of the Model. Be sure to lubricate all the wheel bearings, gear bearings etc. that are visible to you.

Thorough Lubrication of the locomotive should be done every 5 hours of operation.

ESA non-powered:

Each model is provided with Oiler holes on the Axle boxes of each wheel. Use a drop of Light Lubricating Oil to lubricate each Axle end. Also apply a drop of Light Lubricating Oil at the base of the pivot bolts (space between the Delrin washers and the outer side of the dummy weights) that attach the wheel bogies to the body of the Railcars.

Do not over lubricate, for excess oil only picks up unwanted dirt. Be careful to keep lubrication off the painted surfaces, as this causes shiny areas.

Thorough Lubrication of the ESA Railcars should be done every 10 hours of operation.

Operating:

Once the RC is installed, connect the Battery Pack terminals in the model to the Battery connector inside the Model, again make sure that the polarity is correct and your model's battery pack is adequately charged for a short run.

Always SWITCH ON the Tx first before POWERING ON the model. You can power on the model by flipping the 2-way switch to the 'on' position.

Now slowly increase the throttle in any direction. CAUTION: DO NOT RUN THE MOTORS YET ON FULL THROTTLE. Run the model at half throttle in any one direction for a few minutes, then stop, and then

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run it again at half throttle for a few minutes more. Repeat this procedure for about half an hour until the ETA model runs smoothly in both directions.

Once you have run your ETA Model on half throttle in both directions on a test track for at least about an hour, your model should be ready to run at Full throttle on the Outdoor layout.

Now you can couple your ESA to the ETA to make a full train. Make sure to connect the power feed jack on the ESA to the power transfer socket on the ETA to power the lights on the ESA.

Maintenance:

Clean the body of the Models with a clean soft lint free cotton cloth. To remove stubborn grease stains from the painted surface use a light detergent solution with a lint free cloth.

With a bit of care, your PLine ETA/ESA 150 Akku Trieb Wagen Set should give you many years of pleasure and trouble free running.

IMPORTANT!

Some parts may have loosened during shipment. Inspect your model prior to any operations. Please contact PLine at info@pline.co.in for more assistance.

THANK YOU!