



RAIL PANTOGRAPH (WITH CARBON STRIP)DDU

Creation Date	2018-10-08		Page 1 of 2
Volume & Edition	v1-Ed1	Compiled	Mlungisi Tyabashe
Last Edit Date	2026-04-09	Approved	Marcus Sithole



1. DEFINITION

1.1. Purpose

The purpose of this specification is to outline the requirements needed to procure a Pantograph for the 18E locomotives for the depot (MLPS depot).

1.2. Problem Statement

The production department is trying to revive (bring them back to service) our 18E locomotives. The problem is that most of them they do not have pantographs some need to be upgraded. Without the pantograph the locomotive cannot collect power from the overhead wire, meaning it cannot run.

The pantograph is an essential component for the 18E locomotive for it to move, meaning without it the loco will be out of service leading to the trains not running.

2. ORIGINAL EQUIPMENT MANUFACTURERS

This section is aimed at providing guidance on the OEM(s) of the required product.

Original Equivalent Manufacturer			
1. Is it a Specialised Item?	<ul style="list-style-type: none">No, can be bought over the counter	2. Known Original Equipment Manufacturer(s)	
3. Item's Name	<ul style="list-style-type: none">Pantograph with Carbon strip (DDU)	4. Is an equivalent product also preferred?	• Yes

3. TECHNICAL REQUIREMENTS

The technical requirements for the product to be purchased are as follows:

Component, Part or Subassembly Requirements	
Requirements:	<ul style="list-style-type: none">Name : BES Rail PantographDescription: Rail Pantograph with carbarn strip (DDU/ADD)Duty: Must have an automatic drop device (ADD)Mounting: 4-point MountingMaterial: Mild steel frame with carbon strip pantosCurrent Rating: 2000A for pantograph structureVoltage Rating: 3kV DC,25kV AC, 50kV AVColour: GreyContact pressure: 70N to 85NHeight in home position: Approximately 400mmMaximum height from home position: 2655mmTotal weight (without insulators: Approximately 180K
Operational requirement	<ul style="list-style-type: none">Operational instruction must be included
Packaging requirements	<ul style="list-style-type: none">Water Submersible pump must be delivered with wraps to prevent it from damages, plastic or cardboard wrappings are acceptable.

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Health, Safety and Environment Requirements

Safety Requirements:	<ul style="list-style-type: none">No sharp and pointy objects	Health Requirements:	<ul style="list-style-type: none">No harmful substances should be required for the use or its design, e.g. Asbestos.
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4. PICTORIALS

An indication of how the product looks like is shown below.



Figure 1: Pantograph with Carbon Strip (ADD/DDU)

5. COMPILED

This specification is confidential; it shall not be used for any other purpose other than the component procurement purposes. Any clarity is needed, please consult the compiler through respective supply chain management.

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