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## Järnvägsanläggningar

### Strömavtagare

### Egenskaper och provning

## Del 2: Strömavtagare för tunnelvagnar och spårvagnar

*Railway applications*

*Rolling stock*

*Pantographs: Characteristics and tests*

*Part 2: Pantographs for metros and light rail vehicles*

Som svensk standard gäller europastandarden EN 50206-2:1999. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50206-2:1999.



English version

**Railway applications - Rolling stock**  
**Pantographs: Characteristics and tests**  
**Part 2: Pantographs for metros and light rail vehicles**

Applications ferroviaires  
Matériel roulant  
Pantographes: Caractéristiques et essais  
Partie 2: Pantographes pour métros et tramways

Bahnanwendungen - Schienenfahrzeuge  
Merkmale und Prüfungen von Stromabnehmern  
Teil 2: Dachstromabnehmer für Stadtbahnen und Straßenbahnen

This European Standard was approved by CENELEC on 1999-01-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

This European Standard was prepared by SC 9XB, Electromechanical material on board rolling stock, of Technical Committee CENELEC TC 9X, Electrical and electronic applications for railways.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50206-2 on 1999-01-01.

The following dates were fixed:

- latest date by which the EN has to be implemented  
at national level by publication of an identical national standard  
or by endorsement (dop) 2000-01-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2002-01-01

Annexes designated „normative“ are part of the body of the standard.

Annexes designated „informative“ are given for information only.

In this standard, annexes A, B and C are normative and annex D is informative.

### *SC9XB Note:*

Clauses and subclauses subject to further change are indicated in the text by a note.

Those affected are:

- 6.4.2 Resistance to vibrations
- 6.9 Current collection tests

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## Introduction

The electrical power supply of a tractive unit is achieved by the collection of current from the contact wire by means of one or more pantograph(s), installed on the traction unit or on the vehicle.

The contact strip of the pantograph which slides along the contact wire facilitates the transmission of power.

The pantograph and the catenary form two oscillating sub-systems which can be displaced. There exists an unilateral sliding linkage between them, which shall ensure continuous contact. Their design shall allow for minimum wear of both sub-systems when used.

## 1 Scope

This standard defines the general assembly characteristics which are to be applied to pantographs, to enable current collection from the overhead line system. It also defines the tests the pantographs have to perform, excluding insulators.

This standard does not apply to pantograph dielectric tests, which are to be performed on the pantograph installed on the vehicle roof.

This standard does not apply to pantographs used on main line vehicles: these pantographs are considered in EN 50206-1.

This standard relates to conventional suspended overhead line systems and accessories. The systems (or part of them) which are rigidly suspended will require special consideration between the customer and the supplier.

## 2 Normative references

This European Standard incorporates, by dated or undated references, provisions from other publications. These normative references are cited at the appropriate place in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

DIN 43267	(1973)	Pantographs for electric traction, profile limiting for pantograph carbons with leading horns
EN 29 001		Quality systems - Model for quality assurance in design/development, production, installation and servicing
EN 29 002		Quality systems - Model for quality assurance in production and installation
EN 50125-1 <sup>*)</sup>		Railway applications - Environmental conditions for equipment - Part 1: Equipment on board rolling stock
EN 50126		Railway applications - The specification and demonstration of Reliability, Availability, Maintainability and Safety (RAMS)
EN 50206-1		Railway applications - Rolling stock - Pantographs: Characteristics and tests - Part 1: Pantographs for main line vehicles

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<sup>\*)</sup> in preparation