RAIL WEB PERMANENT ELECTRICAL CONTACT
AR60D

for hole diameter 19-20 mm

This unique system was designed and developed by Cembre in 1988 following a review of existing electrical connection systems. The aim of the Cembre system is to provide a low resistance interface between the rail web and the terminal lug. Following in-depth testing in the laboratory and extensive field trials, the system has been recognised and approved for total reliability.

- low electrical resistance (microhm)
- simple to install, not dependent on operator skill level
- quick and easy to install (less than one minute)
- easy to connect/disconnect cables, for fault finding

The advantages of using the rail web contact, AR60D are that the bush can be installed in all weather and environmental conditions, with a simple easy to operate, portable tool, producing a consistent, quality installation, independent of the skill of the operator. The reduced installation time of this systems results in overall cost savings.

During installation the bush is ‘extruded’ and the copper material flows into the wall of the hole, compensating for variation in hole size and filling any voids and uneven surfaces.

Schematic view of the extrusion process (section):

Extensive testing, performed in the test laboratory and in the field, has demonstrated a low and constant resistance, mechanical stability and protection from atmospheric corrosion.

Examples of the electrical tests:

- Heat Cycling Tests
- Short Circuit Testing
- On site Testing

Examples of tests in salt water environments:

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- **Salt Mist Exposure Testing**

**Typical Applications**

- **Transmission of coded and return current on lines fitted with automatic block**

Signalling and traction current connection to manganese steel cast exchange units

Connection of metal structures to rails

Electrical connection of underground metal

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**Technical Characteristics**

<table>
<thead>
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Schematic view of the extrusion process (section):

Examples of lines equipped with automatic block:

Examples of AR60D system in electrical joint applications:

Features and benefits of the AR 60D system have appeared in various Railway Industry journals.

Used by all major European Railway Companies, the AR60D system is proving to be reliable in all conditions.
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Alternative names for this product

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- Salt Mist Exposure Testing

Typical applications:
- Transmission of coded and return current on lines fitted with automatic block
- Signalling and traction current connection to manganese steel cast exchange units
- Connection of metal structures to rails for earthing purpose
- Electrical connection of underground metal structures to rails

Various connections involved in the train location system
- Return current connections to substations

Examples of lines equipped with automatic block:

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Additional information:

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