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# Gruppo Bonomi

A Key Player in Railway Electrification Since the Very Beginning



Since 1928 Gruppo Bonomi's production units have specialised in the engineering and production of solutions to support electrical conductivity and insulation. Our particular expertise lies in the railway, energy and custom sectors.

Over the last 10 years the group has broadened its product base and expertise by acquisition, establishing itself as an international market leader.

Bonomi has been involved in rail electrification from its inception providing high-performance and innovative solutions in overhead line technology (from 1.5 to 25kV). Gruppo Bonomi offers design and production flexibility, which supports customer requirements from component specification to overall line design.

For over 40 years we have been working in profitable partnerships and close collaborations with the technical offices of the railway authorities to develop railway/ tramway and underground overhead lines. This ensures a continuous improvement in the engineering experience, highly customised projects and more efficient and sustainable solutions. For many years Bonomi has been supporting international clients in designing and engineering many overhead contact lines.

We both realise brand new electrification projects and renew old lines with the most modern

cation

standards of the sector.

Our design and engineering specialists support our customers in new electrification and the upgrading of existing lines.

### Gruppo Bonomi in the UK

The Omnia Cantilever was developed in 2008 and introduced to the UK in 2009. This resulted in Network Rail product acceptance in 2011 for its new Series 2 design range.

The drivers behind Series 2 (and indeed Series 1) included increased reliability, reduced maintenance and faster installation.

Omnia ticked these boxes through a range of characteristics including:

- corrosion-resistance materials
- reduced component count and factory quality controls

Through these projects, including North West Electrification **Phases 1** & 2 and **Cumbernauld** in Scotland, Omnia was broadly liked by installers for its flexibility, light weight and simplicity.

However further work was carried out with Network Rail's design department EPDG (now NRDD) to refine the range, including standard walk outs/reach distances and greater adjustability for reduced encumbrance (it seems to be a great plus, considering the great number of low bridges in the UK). Significant support was provided from the Gruppo Bonomi technical team to Network Rail in refining the Series 2 and UK Master Series drawings.

Other investments through CP5 included significant UK stocks of the Omnia cantilever for shorter lead times.

Gruppo Bonomi considers project delivery a key point and together with its UK partners PACE Networks, has held UK Omnia stocks in the region of 1000 cantilevers. This means less than half the typical cantilever lead time and support for emergency requirements right down to same day delivery.

Into CP6 attention has focused on the **cost of electrification**, **efficiency** and on sustainability, with electrification as a vehicle for decarbonisation as well as its other passenger benefits.

Gruppo Bonomi has made a significant investment in developing a lightweight TTC (Twin Track Cantilever) utilising the Omnia technology. The arrangement is hoping to gain product acceptance in the UK in the coming weeks and has a reduced cost over a traditional TTC, as well as offering further cost and carbon benefits around plant, material production, project time scales and foundation works. While analysis will no doubt be carried out on early projects, there is an expectation of £10K to £15K savings per location based on industry feedback. Another benefit of the Omnia TTC is its reduced visual impact over lattice steel designs, a strong point for Omnia in general and an important factor in the public's experience of the rail network.

Gruppo Bonomi's commitment to the UK's electrified railway can be traced back to Rebosio's composite insulators, which were first used in the early 90s and became part of the Gruppo Bonomi in 2002. Once again the group has driven innovation and supported projects such as Voltage Limited Clearances on the Cardiff intersection bridge.

Looking forward, the group is continuing to look at opportunities to deliver more through innovation in cantilevers, droppers, clamps and insulators, as well as bridge and tunnel solutions. In addition to high-quality products and UK stocks Bonomi also offers design support for UK organisations working with their products.

### For more information email Mr. Andrea De Giorgio

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## **BONONI RAILWAY** WE HAVE THE SOLUTION. JUST TRY US!

#### The new OMNIA CANTILEVER

mantains all the advantages of OMNIA innovative system, even in tunnels and reduced encumbrance areas.

- EASY INSTALLATION
- FAST MAINTENANCE
- EASY REGULATION EVEN UNDER MECHANICAL LOAD

*This OMNIA cantilever is* **suitable for nominal voltages from 3kV to 25kV.** *It supports the* **weight of regulated catenaries up to 540 mm<sup>2</sup> and spans up to 40m.** 

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