

## Rail Mounted Concrete Mixing Plant



In 2013 Blend Plants took part in an important project to create a plant for London Underground requirements.

Our mobile mixing plant for concrete production was chosen because of its new technological versatility: a special automated plant of 17 m length, 11 tones weight and 15 m<sup>3</sup> capacity.

The project planning was followed with patience and passion because Blend Plants wanted to create a plant able to satisfy all customer requirements:

- London Underground operators wanted to find a way to slab track the underground line without closing the line for 2 years.
- The meeting between Blend Plants and London Underground in 2013 was only the first of a series of meetings, discussions and drawings about standards that Blend plant had to comply with. The machine had to be able to arrive through the oldest tunnel in the world, dated 1861, to replace the ballast with fast setting concrete, so that trains could pass over it after 2 hours.
- Good knowledge of dosing processes and components mixtures made possible the construction of a mobile mixing plant that mixes concrete directly on site with a resistance RCK 15 within 2 hours, to keep trains running the same morning, and RCK 65 in 28 days.



- Thanks to the Blend plant, the line from Baker Street to Finchley Road is not closed, operators are working during the nights while trains are not running: this has already shown a reduction in line problems.

Technicians no longer have to produce concrete by hand every night in the London tunnel, but they are supported by Blend plant, in the automation of the production system: control and weight systems for cement and aggregates, dosing sensors for admixtures and water, sand humidity probes guarantee the production of concrete with the requested qualities.



Safety is guaranteed using barriers (chains and doors) on board, fire extinguishers and signal lights that warn about plant passage in the tunnel.

This mobile mixing plant for concrete, on a single railway wagon, is powered by battery locomotives: this is the first and only one in the world to be powered by batteries. This system reduces fumes, hazards and improves workplace conditions and the health of workers.

From 16th May 2016 Blend plant has been working non stop, producing from 8m<sup>3</sup> to 15 m<sup>3</sup> of concrete per night.

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**Quicker service coming on the Metropolitan line**  
 JOURNEYS on the Metropolitan line will be faster, and the service will be more reliable, as a result of improvement works to be carried out over the next two years. Starting on May 16, engineers will replace more than 6km of track and draining systems between Baker Street and Finchley Road. The condition of the track and drainage infrastructure on that section of the line is very poor and prone to flooding after periods of heavy rain, causing regular signal failures and delays. On Monday, Tuesday and Wednesday evenings, which are the quietest times of the week, the line will close between Aldgate and Wembley Park to allow the engineers access. Some early-morning trains on Tuesdays, Wednesdays and Thursdays could also be affected, while a small number of weekend closures will also allow works to progress faster.