

# Extrudakerb – Concrete Mixer

## Mobilising Concrete Supply to Site



**E**xtrudakerb's Operations team have identified that all too often concrete delivery targets are not met by our supply chain ready mixed concrete partners.

Frequently the size of the existing fleet of concrete delivery trucks based at a ready mixed concrete plant is insufficient to meet the intense demands of a slipform concrete pour. In addition this fleet is typically suited to the transportation of high slump materials to normal building and civils works rather than the low slump exacting concrete demanded by the slipform

paving process. Whilst the ready mixed concrete supply chain partner will attempt to mitigate the problem by hiring in additional trucking, the success of this is often limited. As a result the quality and rate of supply of concrete delivered can suffer.

After extensive research and proactive discussions with our ready mixed concrete supply chain partners, Extrudakerb decided to procure bespoke 8m<sup>3</sup> capacity concrete mixer trucks specifically designed to meet the demands of a slipform paving concrete pour.

***Larger volume 8m<sup>3</sup> capacity trucks were chosen to reduce vehicle movements per shift and reduce downtime incurred in the period when trucks discharging into the paver are exchanged.***



### **Mixer rather than agitator trucks were chosen for a number of reasons: -**

- The majority of ready mixed concrete batch plants in the UK are dry batch and do not pre-mix the constituent materials prior to loading. The truck therefore not only transports but also mixes the concrete.
- All too often the slump of the concrete loaded is not within the tight tolerances required by a successful slipform paving process and re-tempering of the concrete is required at the point of discharge.
- Mixer trucks provide a more effective platform for automated re-tempering of the concrete in transit.



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**T**he loading hopper and discharge opening of the trucks were modified to suit the low slump concrete needed for a slipform paving pour.

The mixer barrel was fitted with a specialised camera that allows both the driver and the paving crew to inspect the concrete without climbing onto the truck.

The trucks are fitted with an integral wash-down tank that avoids the need to wash out into on site containers. Wash down residue is emptied and re-cycled at the concrete batch plant.

The trucks were also fitted with a bespoke “auto-slump” feature that features hardware and software systems that allows for automated re-tempering of the concrete both in transit and immediately prior to discharge. The software system monitors and records all water addition as well as batch, travel and discharge time, ambient and material temperatures. The “auto-slump” system also integrates a GPS location system so that all data logging includes truck position. The system provides real time information and the data portal can be viewed by both the site team and the head office management team, thus maximising daily outputs.



*Improving safety was a key focus and the trucks are fitted with 360 degree FORS safety standard accredited cameras that aside from recoding onto a truck based hard drive also allow remote monitoring.*



The improvements already noted to both the quality and slump consistency at point of discharge as well as paver crew productivity have exceeded expectations. A total of 5300m³ of concrete was supplied to our M6 J2 to 4 project for the verge element of the works, notable performance figures are:-

- Average discharge time has been reduced from 35 minutes to 20 minutes
- A fastest discharge time of 12 minutes was achieved
- Average pour volume per 6 hour paving shift was 80m³
- % of returned concrete was 1%

Currently Extrudakerb operate a “fleet of 8” specialised concrete mixer trucks which represents an investment of over £1.2m and these can support 2 of the companies slipform pavers. Further investment is planned and ultimately the company intends to only supply concrete to its fleet of slipform pavers via self-owned specialised mixer trucks.



**For more information on the Extrudakerb Concrete Mixer, call Extrudakerb on T: +44 (0) 1709 862 076 or E: [sales@extrudakerb.co.uk](mailto:sales@extrudakerb.co.uk)**

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