



Installation, Delivery and Safe Handling Guidance

Prestressed Concrete Floors, Precast Concrete Stairs and Landings Units

Site Access

- Before a vehicle arrives on site, the access from the highway onto and around the site should be agreed between ACP (Concrete) and the Main Contractor his Agent on site, including suitable standing for the delivery vehicles.
- A nominated person should act as Signaller to supervise and assist in the positioning of the delivery vehicle both on and off site.
- The final acceptance of the access suitability will remain with the vehicle driver, the driver must satisfy himself before entering the site that his vehicle can travel safely on the access provided.
- In all cases the driver must not remove any securing straps, chains or tarpaulins, until his vehicle is at rest in the area agreed for unloading and which is suitable for the purpose.
- Where there is no access onto site, and the delivery vehicle must park on the public highway, then the Main Contractor, Client or his Agent must provide any signs, lighting and guarding necessary for the protection of the vehicle driver and the public. This might include traffic management or road closure.

Off loading

- The Main Contractor or his agent must liaise with ACP (Concrete) Ltd to ensure that the correct lifting equipment is available on site to off load components and must also visually inspect cast-in fittings to ensure that no damage has occurred in transit.
- The Main Contractor or his Agent should request a copy of the relevant test certificate(s) for the lifting equipment prior to use from the provider of the lifting equipment (even if these are being provided by ACP (Concrete) Ltd).
- Components must be unloaded in such a manner that the stability of the delivery vehicle is not adversely affected. The Foreman should, when necessary, liaise with the delivery driver to ascertain the most suitable unloading sequence.
- Delivery vehicles fitted with cranes will not off load onto foundations or upper floor levels.

Off loading continued

- When components are taken straight from the vehicle to their fixing position, care must be taken to ensure that any loose packing or protective materials have been removed and that any fittings are secure.
- The driver must remain in a safe position, until advised that the lifting operations have ended. ACP (Concrete) Ltd will ensure that any delivery drivers are equipped with necessary PPE.
- Current legislations require that the risk of falling from height be controlled, therefore it is a requirement by law that a passive fall arrest system be in place around the wagon during the off loading procedure, to provide a safe working environment for any person(s) with the responsibility of working on the wagon platform. This is the responsibility of the Main Contractor or his Agent.
- Any specialist equipment e.g. grabs, must be used strictly in accordance with the manufacturer's recommendations. Where proprietary lifting systems are not provided, choke-hitched chains or slings should be positioned between 150mm and 300mm in from the ends, (unless specific permission has been received from the manufacturer WIDESLAB FLOORING UNITS & PRECAST STAIR UNITS must not be lifted from beneath using a fork lift truck or other such lifting equipment).
- Lifting chains or slings should be of sufficient lengths so that the included angle is not greater than 90° (45° from vertical) unless otherwise agreed by the Appointed Person.
- In situations where limited headroom is available the Appointed Person must ensure that the lift is planned so as to maintain a maximum of 90° at the included angle.
- Special consideration may be needed for cantilever units (refer to ACP (Concrete) Ltd) for advice.

Inspection of Prestressed Concrete Flooring Prior to Installation

Every unit must be inspected before lifting from the delivery transport for obvious signs of damage e.g. cracking, damage around holes/notches and other physical damage. When a unit is deemed to be damaged the Contractor or his Agent must telephone ACP (Concrete) Ltd for advice.

Before removing chains, components must be measured to ensure that the correct bearing can be achieved and the Company contacted in any case when the foreman is in doubt.

A further visual inspection must also take place after the units have been installed. In addition to the defects considered above, a check must also be made to ensure that all units have adequate bearing.

Stacking at Ground Level

The ground must be firm and level and wherever possible stacking of components should be on firm hardcore or over site concrete. Components bearers (Stacking Timbers) must be placed at correct position along their length, in accordance with ACP (Concrete) Ltd's recommendations (floor units 200mm minimum/400mm maximum from each end).

Where components are stacked in layers of more than one high, the bearers to each layer should line through vertically to avoid shear planes.

The height to which components can be safely stacked on site will be greatly influenced by the condition of the ground on which they bear. Another prime consideration should be the height to which a man can reach to pass lifting chains or slings around the components.

Similar length units should be stacked together wherever possible.

The need to climb onto stacked components to secure chains or other means of lifting must be avoided.

If the units are to be left stacked for any length of time, consideration should be given to the practicalities and sequence of their subsequent fixing.

Units should be stacked as near as possible to their final fixed positions to avoid additional handling or transport hazards.

In instances where doubt exists concerning any aspect of site stacking, the Contractor or his Agent must refer back to ACP (Concrete) Ltd before allowing units to be stacked.

Temporary Storage on Installed Flooring

Uninstalled components should be stacked at ground level but, on sites with limited space, or where the type of construction does not allow stacking at ground level, components may have to be temporarily stored on top of the incomplete floor or previously fixed components.

Where this is to occur the Building Designer and or Main Contractor or his Agent must take due consideration of the resulting imposed loads, and the stability of the structure, especially lintels over openings. This action should be the subject of a Design Risk Assessment and Safe Working Method Statement prior to the commencement on site by the Main Contractor or his Agent.

In most circumstances the following measures should be considered to ensure minimum risk:

- All loads should be lowered gently onto the floor, avoiding sudden impact, which may cause damage.
- When components are being stacked, bearers should run at 90° to the span of the floor on which they bear. Wherever possible, bearers should be placed above the wall or bearing supporting the prestressed flooring.
- Where a number of components are to be stored, they should be spread as far apart over the floor as possible to avoid concentrated loading.
- No further loads should be placed on floors already carrying stacked components, e.g. bricks, blocks, other building materials or plant.
- To avoid damage, components that have detail such as holes or cut widths should be placed at the top of stacked components or separately.

DISCLAIMER:

Please note that any information provided is to be used as a guide only. Any lifting/handling operations should be carried out by trained and competent personnel only. ACP (Concrete) Limited will not be held responsible for any damage or injuries in connection with handling or installation not carried out by ACP (Concrete) Limited.