



# CREAGH

## SAFETY GUIDE

### FOR CONSTRUCTION

GUIDANCE FOR HANDLING  
& INSTALLATION OF  
HOLLOWCORE UNITS,  
FLOOR SLABS & STAIRS

setting  
safe  
standards



INFORMATION GUIDE

# Sequence of lifting for Prestressed Hollowcore Flooring

## *Hollowcore Fitting guidelines sequence of lifting*

### Step 1

Place passive fall protection or other measures as necessary to the fitting position.

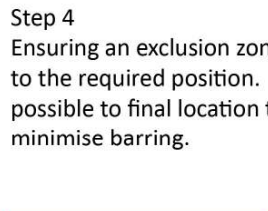


### Step 2

After completion of the pre-lifting checklist, fit the lifting equipment to the unit.

### Step 3

Ensure that all debris is cleared from the top of units prior to lifting.



### Step 4

Ensuring an exclusion zone is in place, lift unit to the required position. Place it as close as possible to final location to minimise barring.



### Step 5 (Specific to hollowcore) –

Units should be placed next to the previous slab so the gap between is fully closed. Final placement of units may be made with pins only or barring if no pins are present

Step 6 -If it is necessary to grout the units together using C35 concrete with 10mm aggregate.

### After final placement of hollowcore units:

- Do not place heavy loads on the floor units until the joint has at least 3 days to cure
- When loading with blocks, ensure that the loads are spread at the bearing end max 1/3 from the end of the slab and not mid span.
- Pneumatic drills and other heavy machinery must not be used under any circumstances.
- Prior to coring or loading units, please contact Creagh Concrete Products Ltd Technical department.

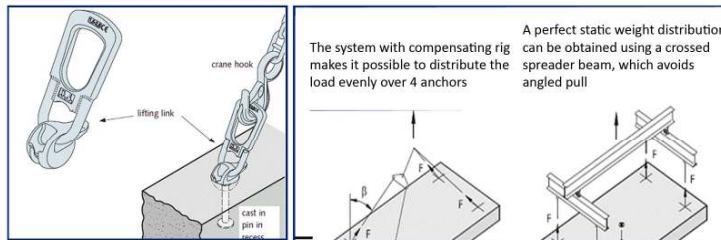
# Creagh Concrete Lifting Equipment

Hollowcore slabs can be lifted into position using choke chains, a grab/clamp, lifting pins and compensator with safety chains. The equipment should only be used according to manufacturer's guidance and LOLER regulations

**Option 1** - Clamps and safety chains can be used to lift slabs as shown in the photograph below.



**Option 2** - Use lifting pins safety loop chains. Lifting Pin is known as a 'DEHA' type Lifter. Compensator chains should be used to install units with lifting pins. The compensator will ensure an equal lift on each pin.



DEHA TYPE LIFTER

COMPENSATOR CHAINS

## Creagh Concrete size guide of lifting pins

<b>Slab Depth (d)</b>	<b>Size of pin to be used</b>
80, 90, 100, 110, 150 Solid	2.5T
150 Dense	2.5T
150, 200 Hollowcore	2.5T
250, 260, 300 Hollowcore	5.0T
350, 400, 420 Hollowcore	7.5T

**Option 3** - Slabs cast without Lifting Pins can be hoisted into position using slings or chains positioned no more than 600mm from each end of the slab. Final placement is carried out by barring.

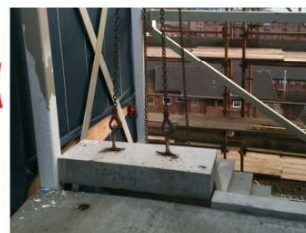


## Handling Guide for Stairs

When off loading stair flights, close attention is required to prevent any damage to the units.

The correct procedure when lifting stairs is to:

- Hoist using a crane with four chains complete with shortening clutches.
- The type and size of cast in lifting points may vary; details of the lifting clutch required may be found on our construction drawings or the size guide of lifting pins.
- Plastic shims can be used as necessary to achieve the correct level.
- Details of the heaviest lift can be found on the stair arrangement drawing.
- Before installation, ensure that the bearing points are prepared and ready for placement.
- All debris should be cleared from the stair so that no obstructions remain.
- Ensure any load bearing block work is at least 72hrs old and steelwork is lined and leveled with bases grouted.
- Bearing measurements are detailed on Installation drawings.
- For installation, the stair units should be lifted upright, in the position that they are going to be fitted
- We recommend the use of safety chains



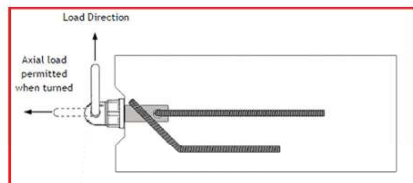
HANDLING OF STAIRS  
USING DEHA TYPE  
LIFTERS



# Handling Guide for Wall Panels



Precast Wall Panels are delivered on their flat. To ensure that no damage occurs to the edges of the wall panel units when standing them upright, see storage guide on back!



SWIVEL LIFTER FOR WALL PANELS

The correct procedure when lifting wall panels is to: Hoist the panel off the trailer and place on wooden battons onto the ground.

- Tilt the units into the upright position.
- The units can then be lifted by either:

### Option A

In cases where threaded lifting inserts are used, the screw in lifter or lifting clutch should be securely fastened and chains attached before lifting as shown in the photographs.



### Option B

A sling or chain can be passed through the hole on the face of the unit.

- Once secure, the panel can be raised to an upright position and lifted into position.
- All wall panels have a key which acts as a rain stop and helps to locate one unit on top of another when fitting. Note that the protruding half of the key should always be at the top of the panel when being fitted, with the recessed side to the bottom.

**NOTE. PANELS HAVE BEEN DESIGNED FOR AGREED LOADS AS PER QUOTATION. DO NOT ALLOW EXCESSIVE LOADING WITHOUT FIRST CONSULTING OUR TECHNICAL OFFICE.**

## WHAT IS THE GUIDANCE

This guidance document has been developed to improve the safe handling of hollowcore units, floor slabs and stairs. It is important that the lifting operations are carried out by competent persons, who use certified lifting equipment and have read this guide in full.

Included in this guide is the pre-lifting checklist, the correct handling procedures and the safe storage requirements. This will ensure minimal damage to units and optimum site safety while lifting.

A safe storage guide has been included however, it should be noted that the height of stacks has not been specified and will depend on the type of unit, depth, lifting equipment and ground conditions in addition to the safe height a person can reach to pass lifting chains around the units.

This document has been prepared in collaboration with the Precast Flooring Federation (PFF) Safe Erection of Precast Concrete Flooring Guidelines available at [www.precastfloors.info](http://www.precastfloors.info).



**Please Note.** Creagh Concrete Products Ltd (CCPL) accepts no responsibility for any damage to products resulting from or caused by not following this guide. Please be advised CCPL have competent fitting teams to install these products.

If you have any issues or queries please do not hesitate to contact our team!

Health and Safety Department  
Direct Line: 028 796 51219

Technical Manager: Thomas Dunne  
028 7965 1231

Northern Ireland Head Office

Tel: 028 796 50500

Scotland Office

Tel: 01313 335 405

England Office

Tel: 01480 217 454

[www.creaghconcrete.com](http://www.creaghconcrete.com)

## PRE-LIFTING CHECKLIST

- Before installation, ensure that the bearing points are prepared and ready for placement.
- All debris should be cleared to leave an even platform. All site obstructions, which impede or obstruct the standing position of the lorry must be removed prior to the arrival on site
- Ensure any load bearing block work is at least 72hrs old; it is good practice to ensure that external cavity walls are no more than 225mm below bearing levels.
- On steelwork construction all steelwork should be lined and levelled with bases grouted. Bearing measurements are detailed on Installation drawings.
- A suitable access road for lorries to enter and leave site must be provided.
- A hardstanding area adjacent to the building must be provided for the safe off loading.



- Perimeter edge protection should be installed and either Air bags or netting to facilitate the fixing teams.
- Clearance zones must be erected using barriers/tape to ensure no persons are working below.
- On sites where overhead cables are located the clearance margin requirements must be confirmed with the Electricity Provider and observed at all times.
- All personnel should be properly trained to erect the units, either in the form of CSCS or a specialist CSR training course.
- [Visually inspect units for cracks and defects. Any visible defects should be reported to CCPL prior to lifting.](#)
- Details of the heaviest lift can be found on the slab layout drawing.

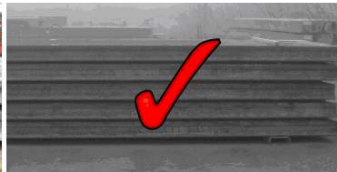


## TRANSPORT & STORAGE GUIDE FOR FLOORING AND WALL PANELS

- The fundamental concern when loading a vehicle is to ensure there is an even weight distribution and load stability.
- When loaded the units must be properly secured to the vehicle to prevent movement during transit.
- If it is necessary to stack the units the following guide lines should be followed:
- Hard level ground must be used.
- Timber battens must be levelled.
- When one unit is stacked on top of another, timber battens should be located directly above those on the level below to avoid shear planes.



- Timber battens should also be located as per precast concrete fed guidelines.
- Any units with detail such as holes cut widths should be stored at the top of stacks



[www.creaghconcrete.com](http://www.creaghconcrete.com)

*For further information contact:*

**HEAD OFFICE:**

Blackpark Road  
Toomebridge  
Co. Antrim  
BT41 3SL

**Tel:** 028 796 50500

**Fax:** 028 79659596

**Email:** [safety@creaghconcrete.com](mailto:safety@creaghconcrete.com)