



ECHO FLOORS (PTY) LTD HOLLOW-CORE CONCRETE FLOORS

A name truly cast in concrete



INTRODUCTION TO ECHO FLOORS

The oldest company in the group, established in Gauteng in 1982. The core business is the manufacture and installation of precast reinforced hollow-core concrete slabs.

Product quality and client satisfaction has always been important to Echo Floors hence our statement "Committed to Quality, Committed to you." Echo Floors quality management systems has secured an ISO9001:2008 certification and the product is SABS approved.



SERVICES OFFERED

Echo Floors provide a complete service, from the professional design to the manufacture, delivery, installation and grouting of precast reinforced hollow-core slabs. Standard size: 900mm wide, 150mm deep and supplied in lengths of up to 8.2m in 100mm increments. All panel lengths over 6.8m are used over internal 110mm load bearing walls.

This service can include any or all of the following:

- Detailed layout drawing
- Design and engineer's certification
- Site measurement
- Full installation service
- Supply and installation of structural steel over openings (if necessary)
- Grouting between the longitudinal joints. (Materials by the Contractor)

Grouting

This service is included in the price and is done by an in-house team. Echo grout the longitudinal joints between the slabs, not the ends nor the sides. This is a labour only service, all the materials are sourced from the site. Approximate quantities: 1m³ of riversand and 10 bags of cement per 100m² of slab.

Installation

The Echo panels are hoisted into position by a mobile or truck mounted crane. This means that sound and clear access to the building on which the slabs are to be erected is required. The installation of 600m² per day per installation team is possible. Echo Floors use various size cranes depending on the site requirements and access available. Should a suspended slab be required inside an existing building, the entrance available must be a minimum 4,5m high x 3,0m wide provided there is sufficient turning space in front of the entrance for articulated trucks.



*Centre line of props - One prop per panel.
(Only for spans longer than 5m)*



Top view of the joint between the panels. This provides the shear key between the panels, providing a monolithic slab.



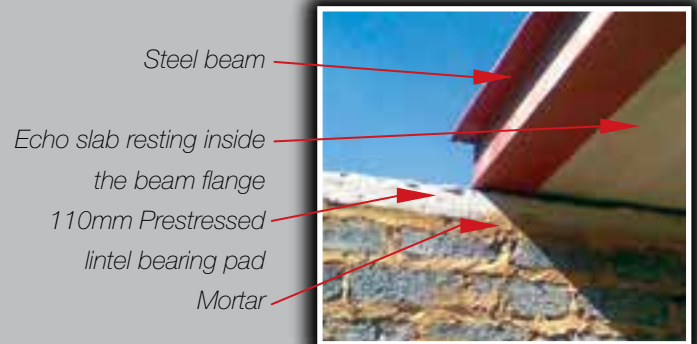
The grouted slab, building can continue once the grouting has cured.



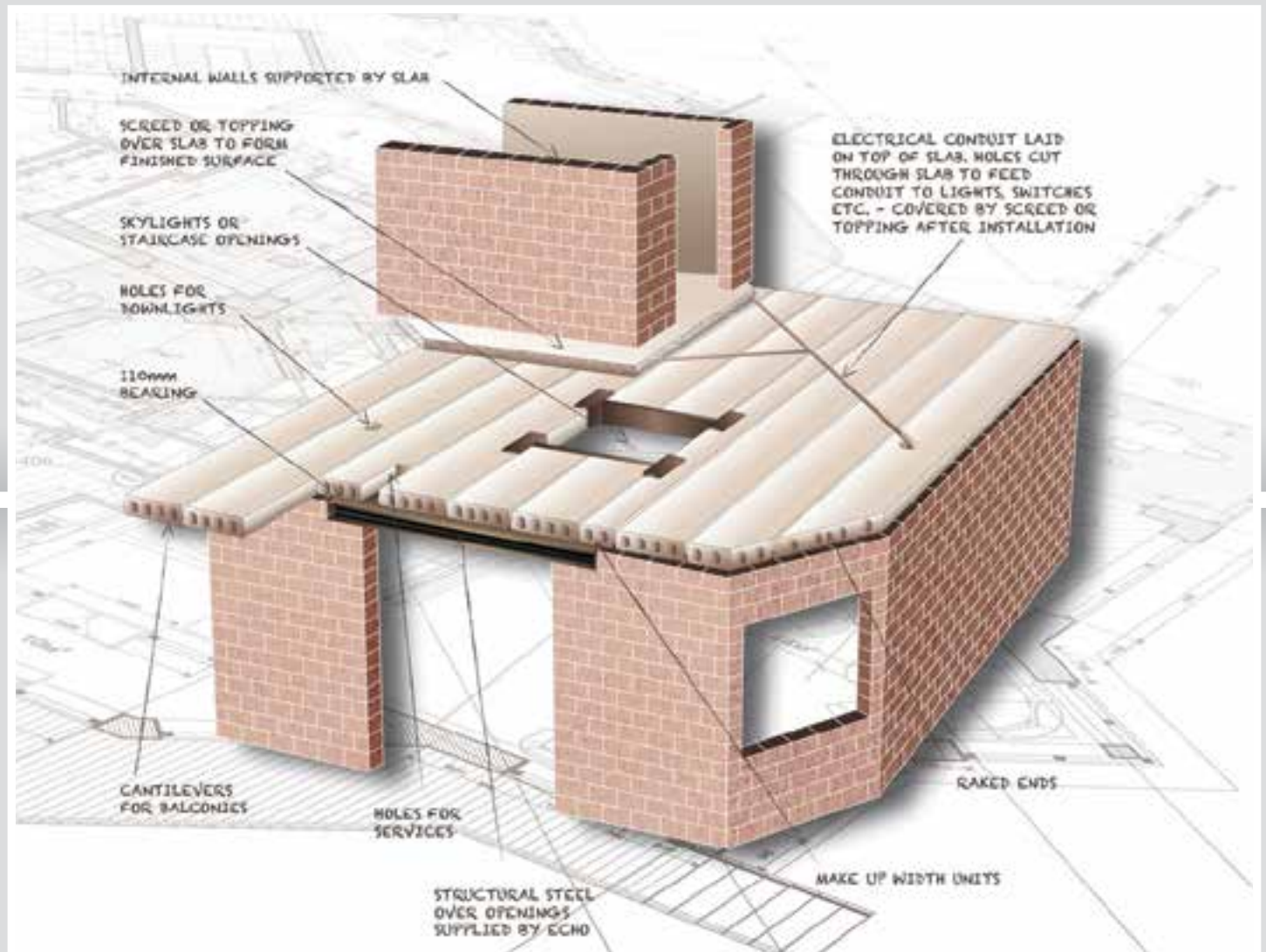
Mesh in screed / topping by the contractor.

ECHO FLOORS BASIC DESIGN PARAMETERS

1. All clear spans 5.0m and over must be propped in the centre during the grouting of the joints.
2. All clear spans over 5.0m require a structural topping cast on the slab (minimum 30MPa with 13mm stone).
3. Props should be left in position for a minimum of 10 days after grouting and casting a topping.
4. External walls at first floor level can be built while props are in position. Internal walls which are supported by the slab may only be constructed after props have been removed.
5. Openings up to 2 metres wide can be covered by 2 lintels side by side plus five courses of brickwork with brickforce in every course. This is suitable for the support of slabs up to 5.0m long. Openings wider than 2 metres should be referred to the engineer for the detailing of additional structural steel support.
6. Cantilevers up to 1.8m long can be done with Echo slabs with a structural topping and reinforcement.
7. Where Echo slabs are tiled and used as balconies, external walkways and flat roofs, we recommend a minimum reference 100 mesh in the screed/topping over the slabs.
8. The bearing of the Echo panel varies from 60-110mm depending on the type of support structure (masonry, steel or concrete). If the panels are installed into the flange of a steel beam a minimum 60mm bearing is required.
9. Echo Floors keep stock at all times, in lengths up to 8.2m in 100mm increments. Standard width, 900mm and depth of 150mm.
10. The slabs are cut to shape and size to suit the building. A 110mm prestressed lintel used as a bearing pad for a beam. The lintel is bedded into position with the same mortar used to build the wall. This must be done and cured prior to Echo placing the steel beam and slabs.
11. Maximum clear spans should not exceed 6.8m.



TYPICAL SLAB LAYOUT



ECHO FLOORS BASIC DESIGN PARAMETERS

Downlights

It's possible, it's simple and more economical than other systems, no matter what the electricians say.

The fitting of downlights is a matter of coring holes through the slab, or using a hammer and chisel to form the required diameter hole.

Coring is done once the slabs are placed into position and the downlight positions are marked. The result is accurately aligned lights.

The cost per light point is also lower as single light transformers can be placed into the horizontal hollow-cores of the slab, instead of lightboxes.

Conduits can be laid across the slab. They must be placed onto the slab before the contractor places the screed/topping.

Echo provides the contractor with copies of the slab layout. The electrician can use the hollow-cores for the conduits, this eliminates unnecessary criss-crossing of conduits. We encourage the electricians to core in a straight line along the length of the panels which means only one structural rib is removed.

Openings in Echo Floors

Service holes up to 150mm diameter may be made in Echo slabs. Any service holes larger than 150mm should be referred to the Design Engineer to check the detail.

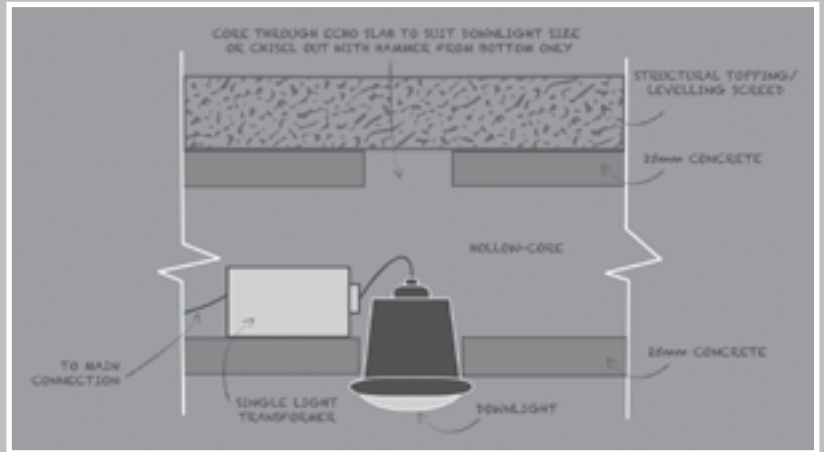
We recommend that all service holes should be cut from the underside up. This minimises patching to the soffits of the units. Openings required for staircases or skylights are made with steel hangers which are supplied and erected by Echo Floors. Alternatively a steel/brick beam can be used as support around the opening. Refer to typical sections and details.

For more technical information go to www.echo.co.za

Cross Section through section of Echo Slab



Cross Section of Downlight & Transformer placing



PART OF ECHO GROUP OF COMPANIES

Echo Floors (Pty) Ltd

Reinforced Hollow Core Floors

Tel: 011 589 8800

Fax: 011 589 8955

Email: expert@echo.co.za

Web: www.echo.co.za

GPS: 26° 03'59.7" S - 28° 10'48.7" E

Cnr Hytor & Chloor Roads,
Chloorkop

Private Bag 1,
Edleen, 1625

LASTING VALUE OF CHOICE