

# Equipment For The Concrete Industry Manufacturer



Stress-on Equipment for the Manufacture of Prestressed Flooring, Wall Panels, T-Beams and Lintels.



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# FLOORING SYSTEMS

## PRESTRESSED CONCRETE FLOORS

### Factory Controlled Quality

Prestressed concrete floors are factory produced and are manufactured in a controlled environment with rigorous quality control systems in operation.

### Long Spans Achievable

Factory made prestressed units offer the maximum design advantages of achieving long spans, which provide versatile and adaptable buildings.

### Structural Efficiency

Prestressed concrete floor systems offer a high degree of structural efficiency. The combination of high strength concrete, prestressing and economically designed section provided span depth ratios which cannot be easily achieved with other methods of floor construction.

### Fire Resistance

All prestressed concrete floors have an inherent fire resistance of up to 2 hours if required.

### Thermal Insulation

The need for energy efficiency in new buildings and the relevant Building Regulations give prestressed concrete floors a clear advantage over other flooring systems.

### Sound Insulation

The mass of prestressed concrete floors provide a good level of sound insulation.

The stressing bed will produce 2.4 meter wide prestressed slab with variable depths from 100mm to 150mm.

### 2.4m Wide Slab Profile.



### Flexibility of Design

Prestressed concrete floors can readily accommodate service pipes, electric wiring etc.

### Soffit Finishes

All prestressed concrete floor systems can accommodate suspended ceilings or direct plastering or painting of the soffit.

### Speed of Erection

Propping, shuttering and concrete pouring on site are virtually eliminated, saving time and money.

### Immediate Working Platform

Once erected a prestressed concrete floor provides a working platform for site operatives.

### Superior Building Products

As structural elements these floor slabs are superior building products. They are better by design, simplicity in use and precision quality.

### Solid Slab Ends

Solid slab ends on bearing walls, along the slab sides and across the slab width at any pre-planned location.

### Reinforced Steel

Reinforced steel can be incorporated or projected from the slab allowing for positive structural continuity on final location.

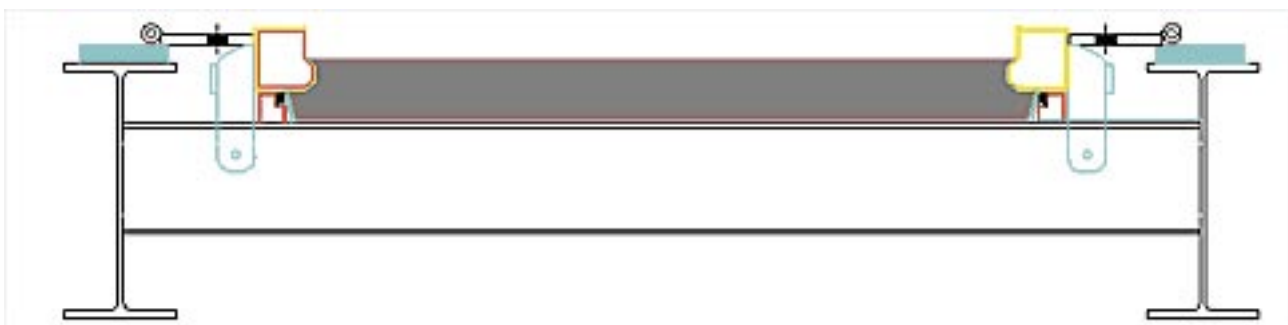
### Stop Ends

Pre-planned stop ends are accurately located during production of the flooring.

The stressing bed will produce 1.2 meter wide prestressed slab with variable depths from 100mm to 135mm solid and 150mm to 250mm cored.



### 1.2m Wide Slab Profile.



# WALL SYSTEMS

**Prestressed Concrete Wall Panels** offer architects, developers and contractors a host of distinct advantages over traditional methods of construction.

The **speed** of build is fast, an average size industrial building can be completed in a day, if so required.

**Prestressed walls** can be erected in all weather. This is particularly significant when an average of 50 working days per annum are lost for block and brickwork construction due to bad weather conditions.

As an alternative to conventional brick and block work, **prestressed wall panels** excel. It combines excellent load bearing performance with thermal properties, fire rating, transmission of sound and cannot be cut open by thieves. This cost effective system is durable and comes as a finished unit as specified.

**Prestressed wall** units are used throughout Europe and North America as a standard method of construction wall in the Agri and Industrial building sectors.

The units are **prestressed** to achieve maximum strength with min wall thickness for load bearing applications as bulk grain stores, earth retaining walls, etc.



1.2m Wall Panel.



Most of the construction in prestressed wall units are fitted horizontally between the steel or concrete columns. Some of the units have been fitted vertically and cast in a concrete foundation.

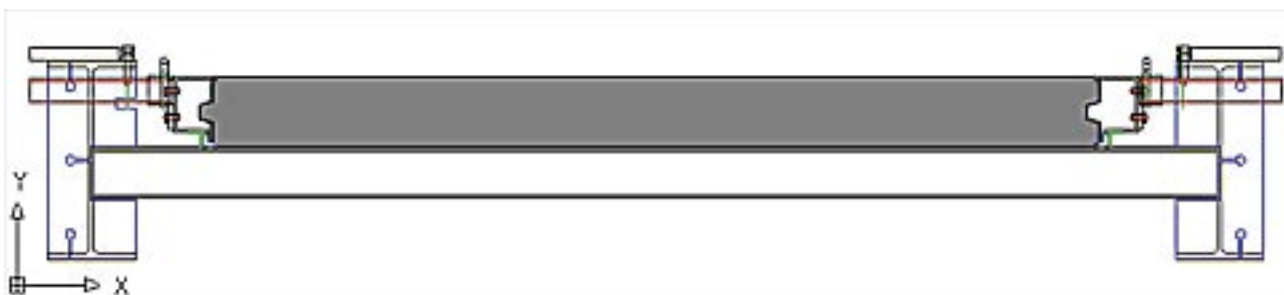
The edge detail on each is designed to form a tongue and groove joint with a 12mm taper at 45 degree on both faces of the unit to conceal any misalignment and further act as a feature. A space of 3mm between the tongue and groove allows for a polyurethane mastic sealant to provide a watertight seal if required.

Furthermore, prestressed panels offer a wide variety of finishes that allow a real architectural alternative to the ubiquitous tin shed. Prestressed panels can be painted, formed in coloured concrete or have a variety of exposed finishes. These finishes can be combined with rebates, patterns and textures.

*“There is great scope for architectural expression that cannot be matched by metal cladding.”*



**1.8m Wall Panel.**



# TEE-BEAM SYSTEMS

**Mac-Fab Tee-Beam Portable Stress on Beds** will manufacture a range of Tee-Beam sizes from 150mm to 225mm in depth, with a maximum of 2000 KN loading. The finished Tee-Beams manufactured on the Mac-Fab Beds are superior building products and are not equalled by any other method of manufacture.

A wide range of standard building blocks are used with the Tee-Beams to form the floor and are compatible with all types of construction including houses, garages, apartments, industrial and commercial properties.

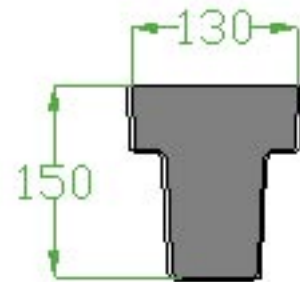
The system offers many advantages over the conventional floors :

**accurate building estimates, sound insulation, higher protection from fire** and many others, and all at a very low cost.

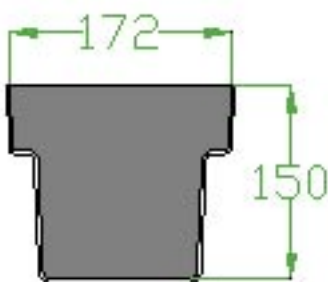
The **Tee-Beam Portable Stress on Beds** to produce Tee-Beams start in length at 50 Meters. The initial set up cost is very capital efficient and your beds can be extended to cope with demand.

Maintenance costs associated with Mac-Fab Tee-Beam Portable Stress on Beds is negligible.

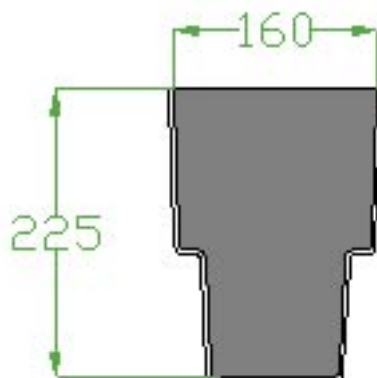
The Mac-Fab Tee-Beam Portable Stress on Beds are supplied with all the necessary ancillary equipment to complete the manufacturing process.



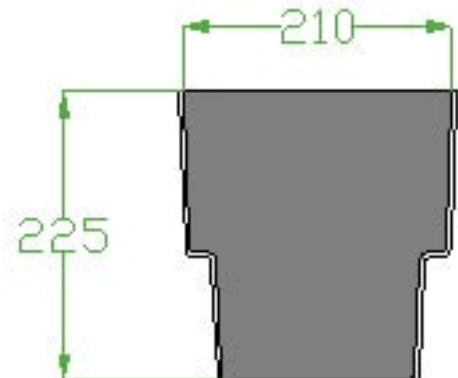
Max Span: 4.500 meters  
Weight: 35kg/lin. meter



Max Span: 5.500 meters  
Weight: 51kg/lin. meter



Max Span: 6.000 meters  
Weight: 68kg/lin. meter



Max Span: 8.000 meters  
Weight: 94kg/lin. meter

**Fire Resistance:**

Beam and Block floors are capable of achieving a fire resistance period of up to one hour.

**Sound Resistance:**

Tee-Beams and Block floors are recommended for use at first floor level in domestic housing to create a quiet home for the benefit of occupants.

**Factory Produced:**

Tee-Beams are factory produced to the highest standards using strict quality control.

**Infill Blocks:**

Infill Blocks are standard.

**Holes for Services:**

Holes can be formed by the omission of blocks and made good by others using insitu concrete after the installation of services.



# MIX-MASTER

The Mac-Fab MIX-MASTER is a new concept in a self-contained portable Batching & Mixing Plant at a very affordable price.

The complete system can be off loaded and set up in two hours.

The materials are loaded into the Sand & Stone Bin by a front loader or skip mounted forklift.

The water tank is connected to the mains for continuous supply, with a holding tank capacity of 700 litres.

The system is powered by a diesel engine which complies with all E.U. noise and emission levels, or an electric motor to power the hydraulic circuit.

Heavy duty construction.

Admixtures and colouring can be added to concrete to meet the individual client needs.

Simple to maintain and easy to operate. Optional 30 tonne bulk silo.





MIX-MASTER pictured with the standard 3 tonne Silo

## POWER UNIT *MODEL D*

4 Cylinder, Water Cooled Kubota Diesel Engine  
28.10 Kw

Fuel Consumption: 9 litres per hour at 2600 r.p.m  
continuous

All engine emissions conform to EU Standards

## POWER UNIT *MODEL E*

30 Kw Electric Motor 1450 rpm

Voltage Rating between 380 / 440 volts

5 pin 3 phase socket (neutral and earth)

## EQUIPMENT

Stone Bin with a 3 cubic meter holding capacity, approximately. The Bin is completely fitted out with Conveyor Belt, Power Drum and all necessary Feed Rollers.

Sand Bin with a 3 cubic meter holding capacity, approximately. The Bin is completely fitted out with Conveyor Belt, Power Drum, and all necessary Feed Rollers.

3 tonne Cement Bin, complete with discharge auger.

30 tonne Cement Silo (optional)

Hydraulic Vibrator which is attached to the Sand & Cement Bins to assist with discharge.

700 litre Water Storage Tank Complete with a 100 litre per minute Water Pump to supply the water to the concrete mix in approximately 20 seconds, and a 3000 psi high Pressure Pump and Lance to wash down the Mixing Pan and Machine. Both Pumps are fitted with a draining system to avoid freezing during the winter months.

# PRECAST

## MF Systems - Dual-Cast 750

The MF **Dual-Cast 750 Precasting Machine** modernises the production of precast products.

It is a versatile machine capable of producing precast products in a variety of sizes, shapes, colours and textures.

### Casting Machine

The MF Casting Machine is unique and has been specially designed to facilitate the spreading of concrete by the operator into the mould. It allows for accurate positioning of the concrete without supplying any excess or waste. It is the only system that allows such ease of use.

The Casting Machine lifts the gang onto the Vibrating Table, "fills it" then replaces it to the stacking area. This allows the filling operator to work independently to the demoulding end of the system.

### Gang Moulds

All Gangs are manufactured to a high standard, with a supporting frame outside the moulds. All moulds are designed to maximise the product content and quality. The mould area measures nominal 4m x 1.5m and can be stacked up to 14 gangs high, at a gang depth of 166mm

All gangs come complete with locating feet to ensure a safe locking position on the Vibrating Table. In the stack, gangs are separated 10mm from each other, ensuring free circulation of warm air to achieve good early concrete strengths for demoulding.

### Handling Machine

The M F Dual-Cast 750 Handling Machine is of robust design, but simple construction. It can handle up to 80 gangs per day, to and from the curing area, including the demoulding of the products.

The Handling Machine is operated from a seat mounted position, powered by an electric motor, operating an hydraulic system.



## TECHNICAL DETAILS

### Handling Machine:

**Stack:** 14 no. gangs high at 166mm deep. Gangs measuring above 166mm deep will reduce the amount of gangs per stack.

**Rotation Bed:** 180°.

**Travel Speed:** 30 metres per minute.

**Lift Speed:** 20 metres per minute.

**Minimum Cycle Time:** 5 minutes per gang.

**Weight:** 3.25 tonnes.

**Overall Dimensions:**

**Height:** 3.5 metres

**Width without seat:** 2.25 metres

**Overall length:** 5.6 metres

All operated valves are self centring. The gang and pallet clamps are fitted with safety valves which cannot be activated when the moulds and stripping pallet are lifted off the stack.

### Casting Machine:

**Weight:** 3 tonnes.

**Overall Length:** 6.85 metres.

**Overall Width:** Without the seat 2.25 metres.

**Overall Height:** 2.4 metres.

**Hopper Capacity:**

1 cubic metre at 2700 high.

**Hopper Travel:**

20 metres/minute.

**Machine Travel Speed:**

30 metres/minute.

**Lift Speed:**

20 metres/minute.

# MAC-FAB SYSTEMS LTD.

In 30 years our company has established itself as a market leader in the Concrete Equipment Industry, with over 500 existing customers world-wide manufacturing a range of concrete products with Mac-Fab equipment. Continuous dialogue with our existing customers has enabled us to anticipate their needs and supply them with top quality equipment. Mac-Fab provide excellent value and customer service through our use of advanced technology, combined with a commitment from our experienced staff who have acquired a vast knowledge of the concrete products market.

Mac-Fab's overall focus is to achieve for our customers the maximum value for every meter of concrete produced.

For further technical information and pricing on your requirements please contact us:

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For a complete overview of our company and our range of products please visit our web site:

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**Web:** [www.macfab.com](http://www.macfab.com)



Other Mac-Fab products include:

**Waste Division**

Baling Presses for the  
Waste Industry

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