

M Series: Load span tables

Self weight KN/m² + finishes/partitions 2.75/m² + Live KN/m² as shown below

Floor Depth	Floor Width	.75	1.5	2.0	2.5	3.0	4.0	5.0	7.5	10.0	15.0
		MAXIMUM SPAN IN METRES									
100mm	1200mm	5.38	5.08	4.89	4.71	4.56	4.29	4.06	3.62	3.30	2.85
	600mm	5.15	4.83	4.64	4.48	4.33	4.08	3.86	3.45	3.14	2.71
	400mm	5.08	4.84	4.66	4.49	4.34	4.09	3.87	3.46	3.14	2.70
150mm	1200mm	7.44	7.08	6.83	6.60	6.39	6.03	5.72	5.12	4.68	4.05
	600mm	7.16	6.89	6.65	6.43	6.23	5.88	5.58	5.00	4.56	3.95
	400mm	6.97	6.57	6.33	6.12	5.93	5.60	5.32	4.77	4.36	3.78
200mm	1200mm	8.86	8.50	8.22	7.96	7.73	7.32	6.97	6.28	5.75	5.01
	600mm	8.58	8.12	7.86	7.62	7.39	7.01	6.67	6.01	5.51	4.80
	400mm	7.39	7.00	6.78	6.57	6.38	6.02	5.71	5.12	4.67	4.05
250mm	1200mm	10.39	9.97	9.69	9.42	9.18	8.75	8.37	7.61	7.02	6.17
	600mm	9.97	9.79	9.51	9.25	9.02	8.59	8.22	7.48	6.90	6.06
	400mm	9.91	9.46	9.20	8.95	8.72	8.32	7.96	7.24	6.69	5.88

Self weight KN/m² + finishes/partitions 1.50 KN/m² + Live KN/m² as shown below

Floor Depth	Floor Width	.75	1.5	2.0	2.5	3.0	4.0	5.0	7.5	10.0	15.0
		MAXIMUM SPAN IN METRES									
100mm	1200mm	5.95	5.68	5.42	5.08	4.88	4.57	4.31	3.82	3.45	2.93
	600mm	5.72	5.40	5.15	4.93	4.73	4.41	4.14	3.64	3.28	2.80
	400mm	5.61	5.41	5.16	4.94	4.74	4.42	4.15	3.63	3.27	2.78
150mm	1200mm	8.15	7.87	7.52	7.18	6.95	6.49	6.11	5.40	4.88	4.18
	600mm	7.81	7.65	7.32	7.03	6.77	6.32	5.96	5.26	4.76	4.07
	400mm	7.66	7.28	6.97	6.69	6.45	6.03	5.68	5.02	4.55	3.90
200mm	1200mm	9.56	9.35	8.98	8.63	8.36	7.85	7.42	6.60	6.00	5.17
	600mm	9.38	8.93	8.58	8.27	7.99	7.50	7.10	6.32	5.75	4.96
	400mm	8.21	7.69	7.39	7.11	6.86	6.41	6.05	5.35	4.85	4.17
250mm	1200mm	11.04	10.81	10.45	10.13	9.83	9.30	8.85	7.96	7.30	6.35
	600mm	10.57	10.51	10.25	9.94	9.64	9.13	8.69	7.82	7.17	6.24
	400mm	10.57	10.25	9.91	9.61	9.33	8.83	8.41	7.58	6.95	6.05

M Series: Self weight of floors KN/m²

100mm	Self Weight	1.97KN/m ²
150mm	Self Weight	2.32 KN/m ²
200mm	Self Weight	2.94 KN/m ²
250mm	Self Weight	4.10 KN/m ²

Conversion table, metric and Imperial units

Quantity	Symbol: Imperial	SI	Conversion factors:	
			Imperial to SI	SI to Imperial
Length	in	mm	25.4	0.039 370
	ft	m	0.3048	3.2808
Mass, weight	lb	kg	0.453 592	2.204 62
	tons	tonnes	1.016 05	0.984 204
Loading	lb/ft ²	kg/m ²	4.882 43	0.204 816
Pressure	lbf	N	4.448 22	0.224 809
	lbf/ft ²	N/m ²	47.8803	0.020 885
Thermal transmittance	Btu/ft ² h degF	W/m ² degC	5.678 26	0.176 110

Francis Floors M Series Precast

IDENTIFICATION

The Francis Concrete group of companies offers a virtually complete operation: a total service encompassing raw materials, on-site fixing and construction. Autonomy of supply is guaranteed by Francis Concrete land- and marine-derived aggregates. Finished products include Lignacite masonry blocks in a wide range of sizes and weights complying with the latest thermal requirements of The Building Regulations, with a choice of appearance and strength for structural and facing applications. A comprehensive range of precast flooring plus a variety of prestressed lintels in widths and depths to suit most requirements. The Francis Concrete fixing and construction service is fully adaptable to meet each client's specific requirements.

Francis Concrete Limited, manufacturers of prestressed and precast concrete floors, offer a fully comprehensive series of flooring systems for every standard or individual requirement in domestic, commercial and industrial applications. Products are available in a wide range of dimensions and are of the highest quality; and together with the site-fixing service form one of the fastest, most economical and reliable flooring services available.

The Francis Flooring range includes the M Series (described here); the F Series and the M65 Series. Separate leaflets on these flooring systems are available on request.

Introduction

The M Series consists of machine formed prestressed precast hollow concrete planks 100mm, 150mm, 200mm and 250mm deep available in three basic widths. High load carrying performance is coupled with minimum floor thickness, giving floors which can provide an instant working platform for other trades. Very low temperatures can be disregarded; when in situ work is normally frost bound, 'M' Series floors are moving ahead.

Authority

The M Series is designed and manufactured to Francis Concrete interpretation of BS CP 110: Part 1: 1972.

The materials used comply with BS 12: Part 2: 1971; BS 882, 1202: Part 2: 1975; and BS 2691: 1969.

DESCRIPTION

Composition and manufacture

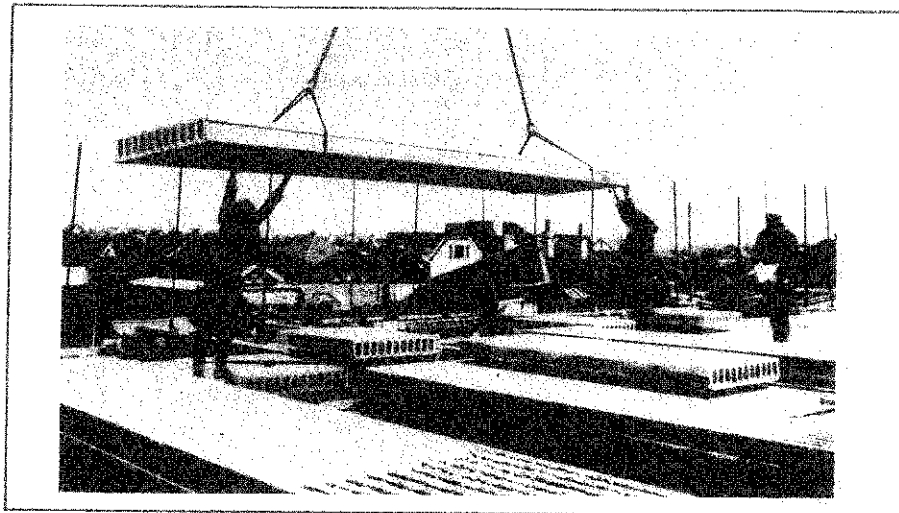
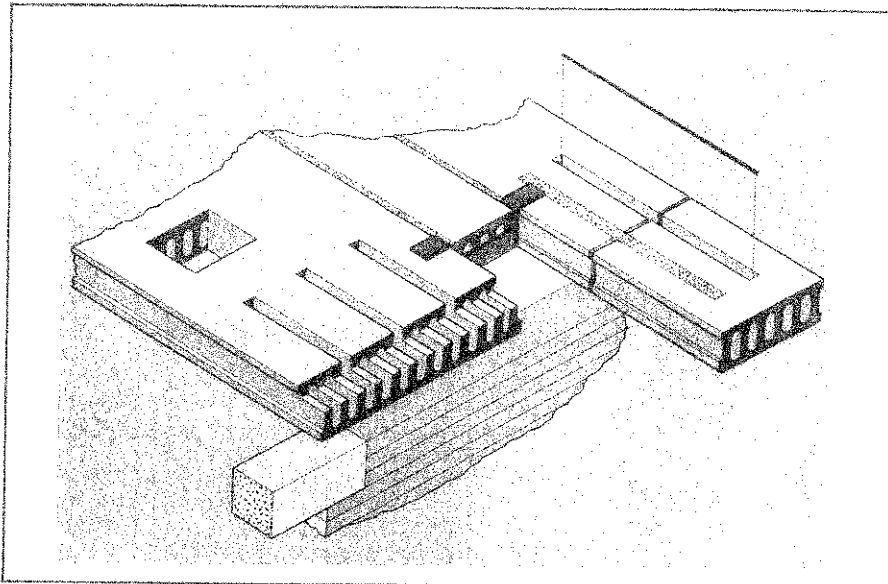
Machine-formed prestressed precast concrete hollow planks. Reinforced with high-tensile steel wire.

Shape

See overleaf.

Size

Width, 1200mm, 600mm and 400mm. Depth of planks, 100mm, 150mm, 200mm and 250mm.



Weight

100mm plank 200kg/m²; 150mm plank 237kg/m²; 200mm plank 300kg/m²; 250mm plank 419kg/m².

PERFORMANCE

Structural

See tables opposite. Spans shown can be increased by the use of a structural topping.

Fire

The tables opposite include for ½ hour fire resistance. 150mm deep floors can be produced to meet 1 hour resistance; 200mm and 250mm floors to meet 2 hour fire resistance, all in accordance with table 57 section 10 of CP 110. Greater fire resistance can be obtained by the use of soffit finishes.

Acoustic

M floors of 150mm, 200mm and 250mm total can be used as deemed-to-satisfy constructions (Specifications 1 and 2 respectively) as described in Schedule 12, Part G of The Building Regulations 1976 for sound insulation between dwelling. A suitable floor finish is also required.

APPLICATIONS

Uses

Structural floors for houses, ground and 1st floor flats, commercial and industrial premises. May be used with steel frame

structures, brickwork, and precast or in situ reinforced concrete framed structures.

CONSTRUCTION

Installation

Fixing service: Where required, a complete fixing service can be provided by the Francis Concrete fixing organisation. This can include in situ concrete floors, staircases, columns and beams. The considerable experience of Francis Concrete in this field helps to ensure that costs are kept to a minimum.

Decoration

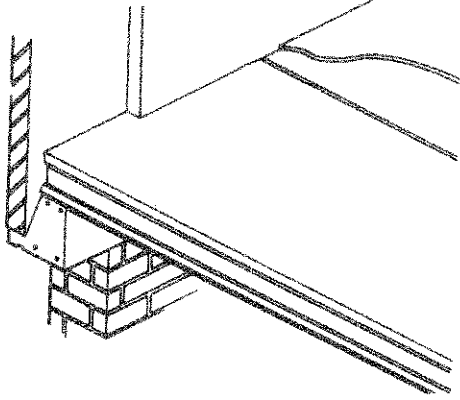
The soffit can be plastered using a normal specification for precast concrete, or a three coat textured plastic finish can be applied direct (hand applied).

TECHNICAL SERVICES

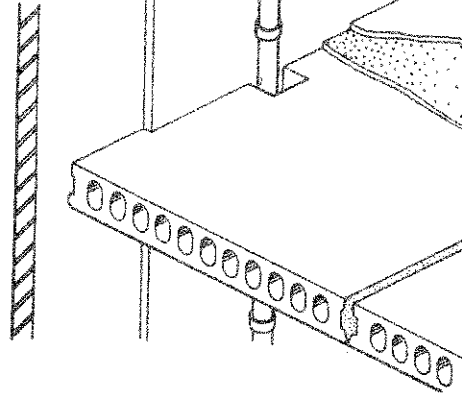
Where the full fixing service is not required, Francis Concrete have technical staff who are always available to offer advice.

Francis Concrete will supply detailed drawings, submit calculations to the appropriate local authority both for supply and fix or supply only contracts. Francis Concrete will also design and construct all in situ work ancillary to the structural floor or constructed

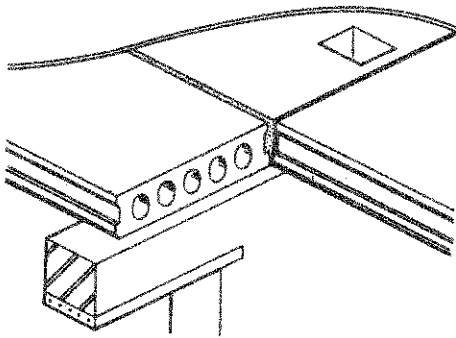
Typical end bearing on external wall



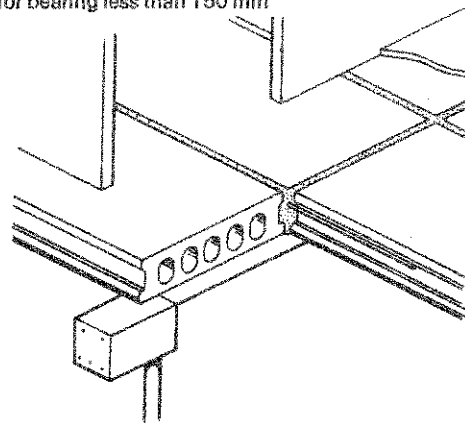
Typical side bearing on external wall



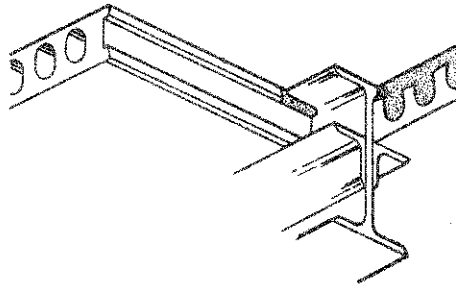
Typical bearing on internal wall where available width for bearing more than 150 mm



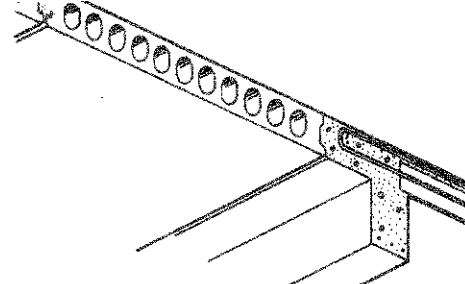
Typical bearing on internal wall where available width for bearing less than 150 mm



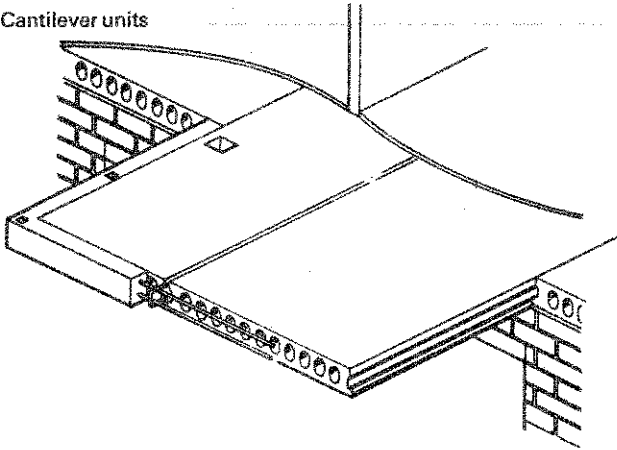
Typical bearing on steelwork



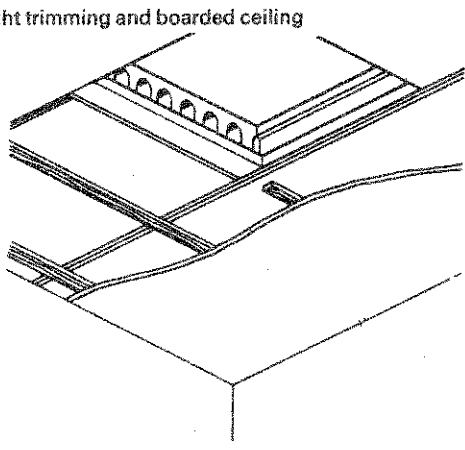
Precast floor and R.C. beam construction



Cantilever units



Roof light trimming and boarded ceiling



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