

Floors

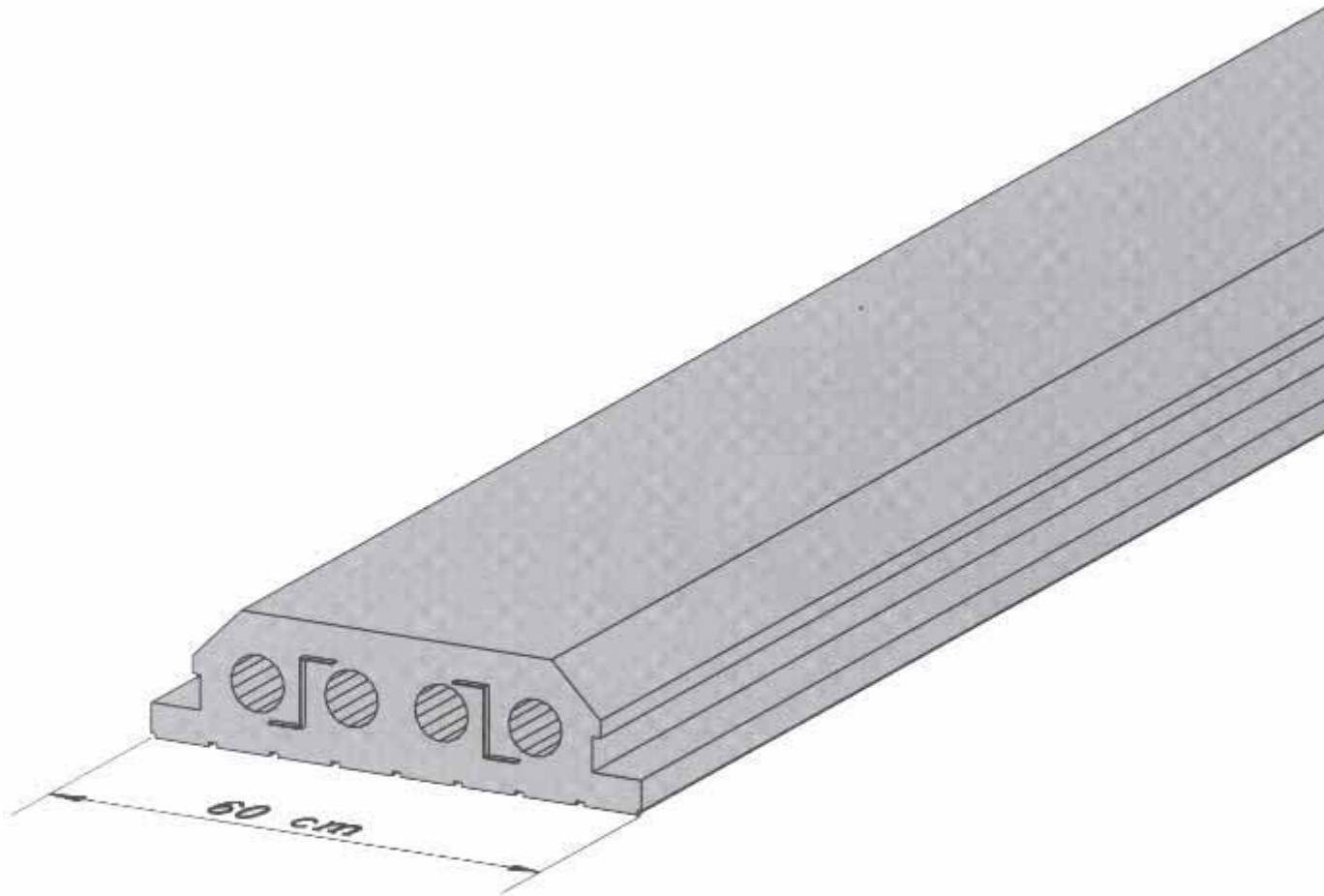
MHP

Weight - 5 kg per running meter

Length as required

Width 600 mm

Depth 160 mm

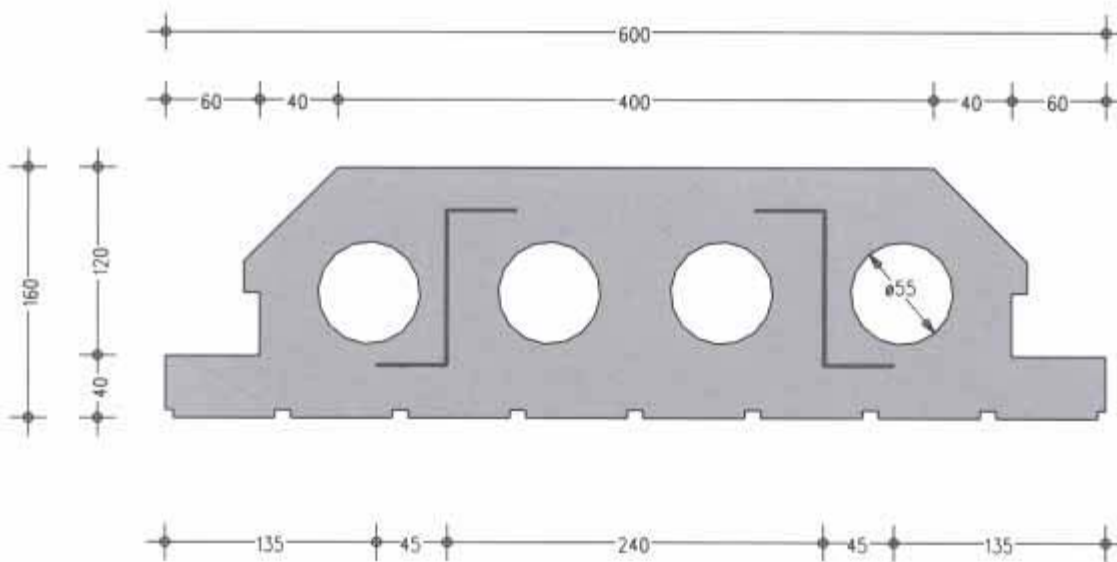


Floors

MHP

Galvanized steel profile 1.2 mm

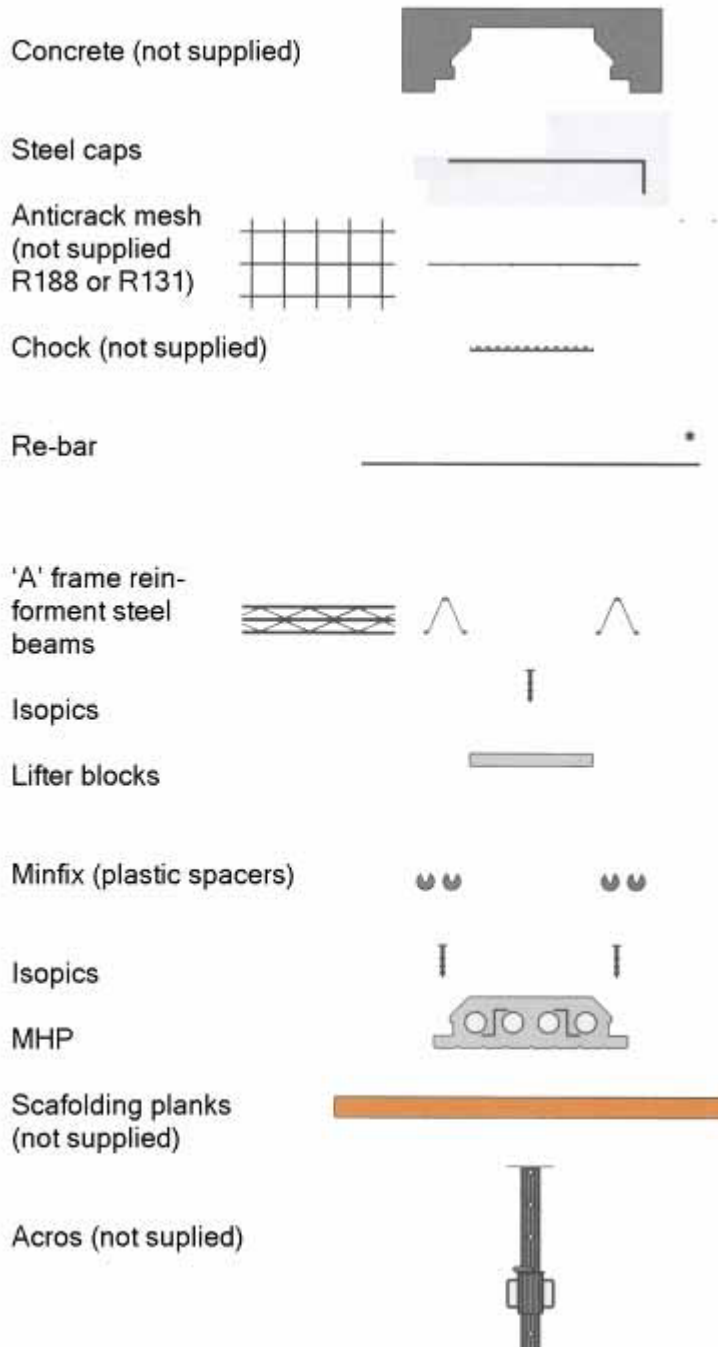
Cross section



Floors

Assembly of the Floors

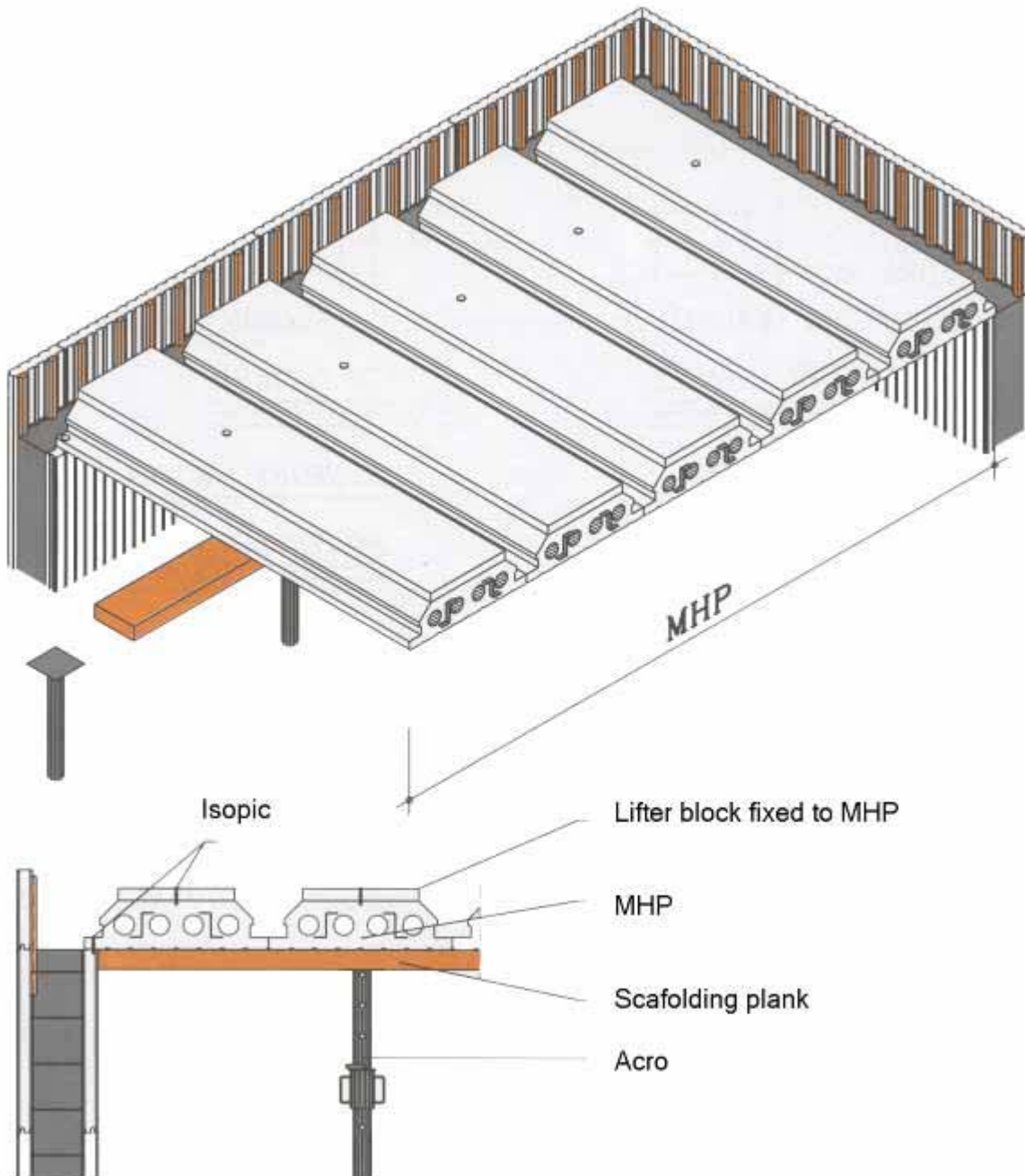
The assemble must be in accordance with the layout drawing
Supplied and agreed.



Floors

MHP

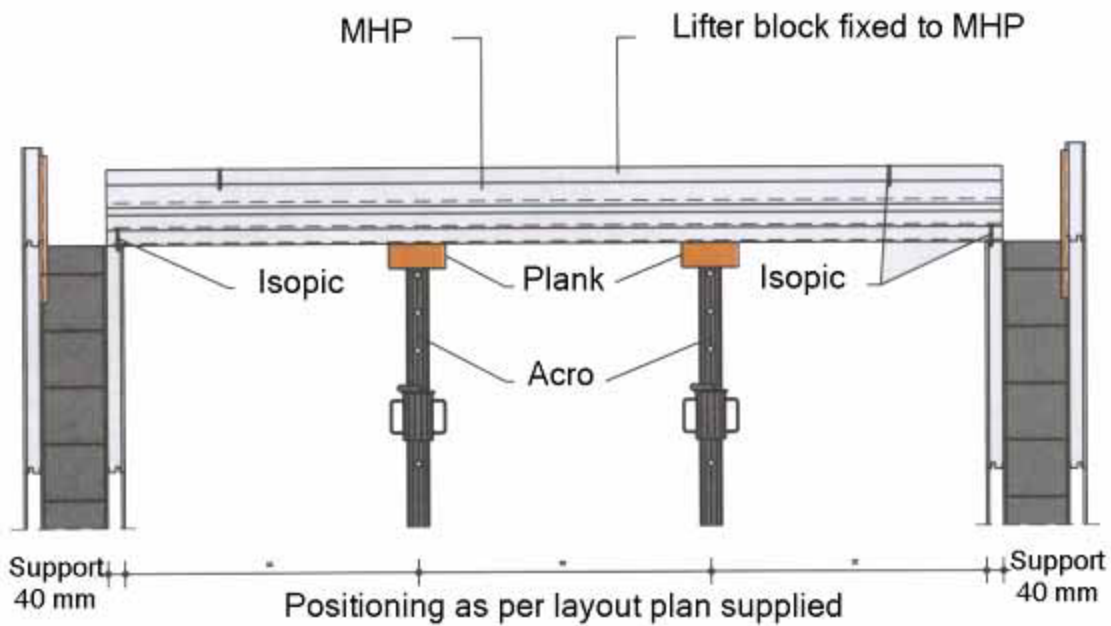
Floor assembly - Fig. 1



Floors

MHP

Floor assembly - Fig. 2



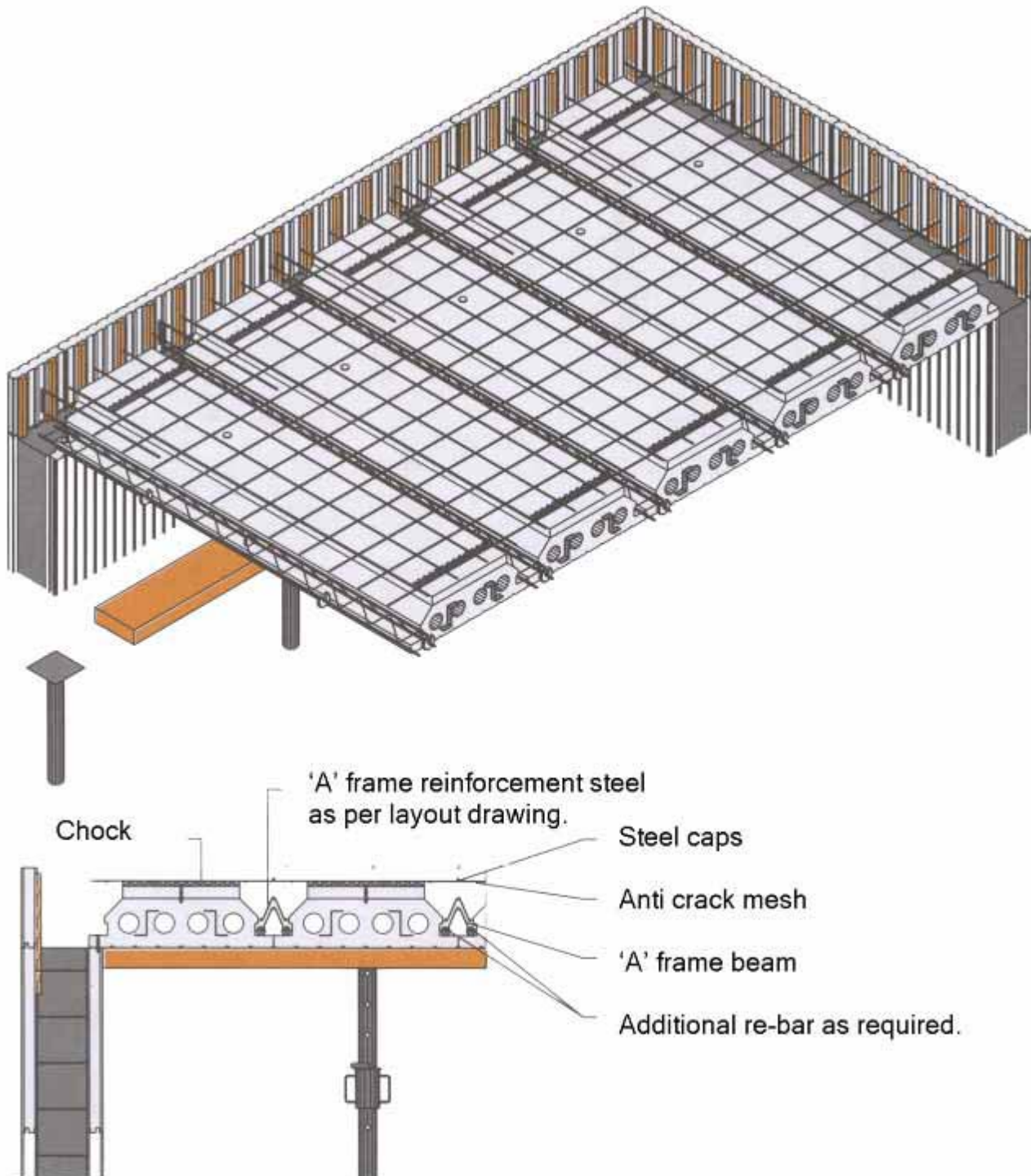
MHP
Fixing : the Floor elements overlap by 40 mm on the walls on either side. For safety, attach the elements with Isopics in each corner.

Lifter blocks
Dimensions: 235 mm x 40 x height as dictated in Floor span.
Fixing: For safety, fix the lifter blocks with Isopics at each end.

Floors

MHP

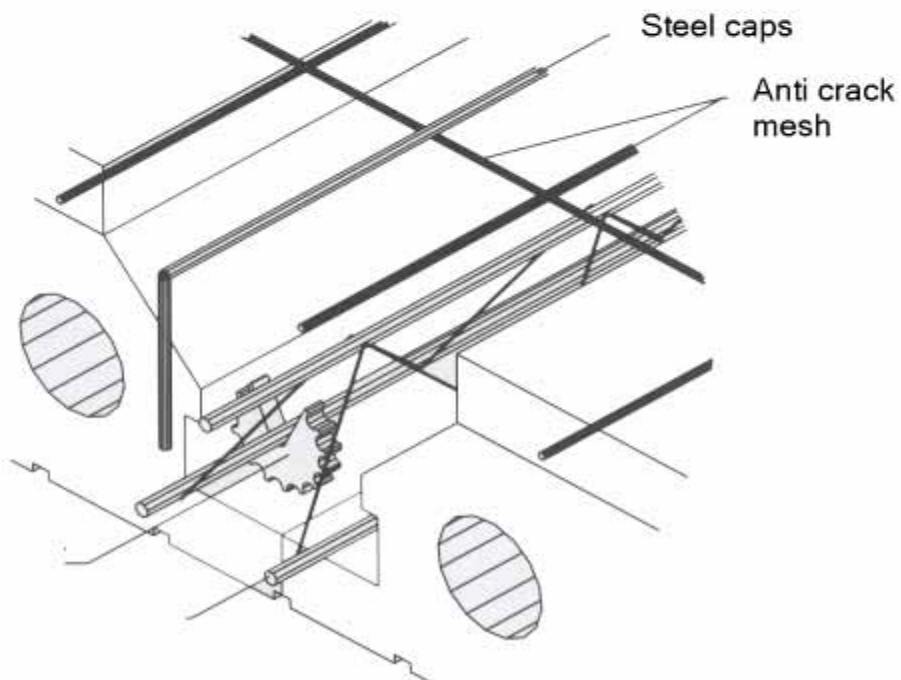
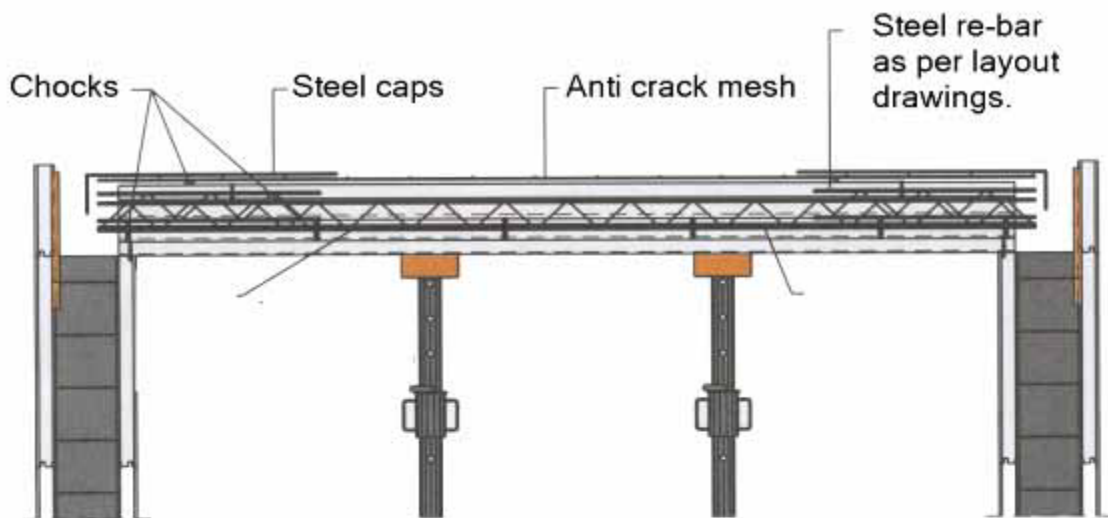
Floor assembly - Fig. 3



Floors

MHP

Floor assembly - Fig. 4

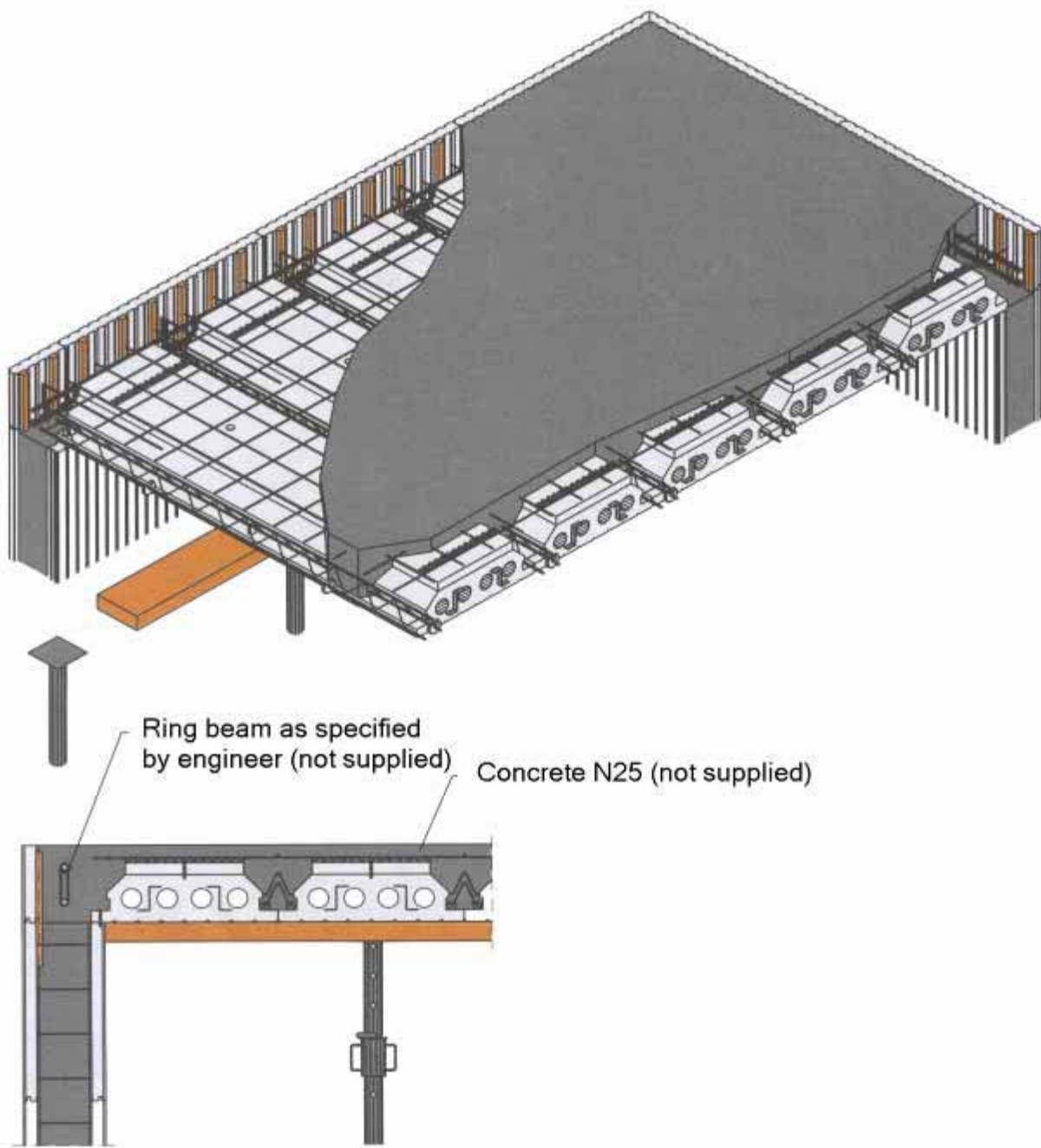


Floors

MHP

Floor assembly - Fig. 5

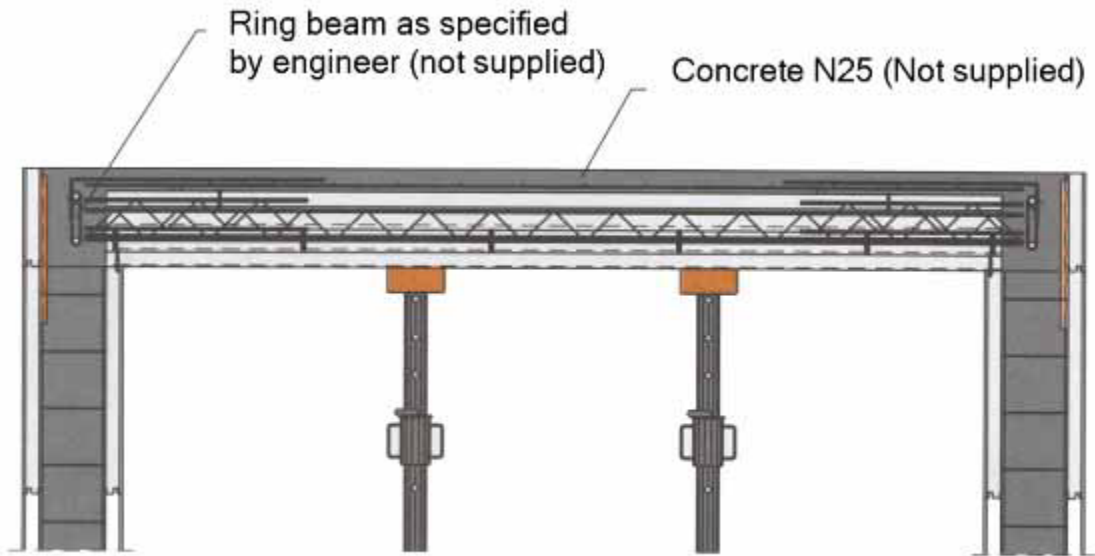
Pouring the Floor



Floors

Floor assembly - Fig. 5

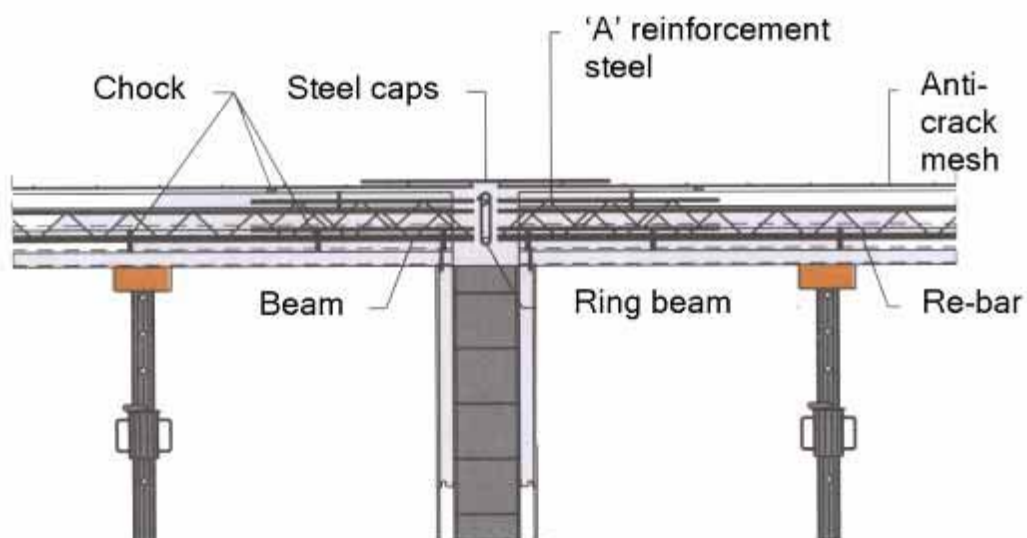
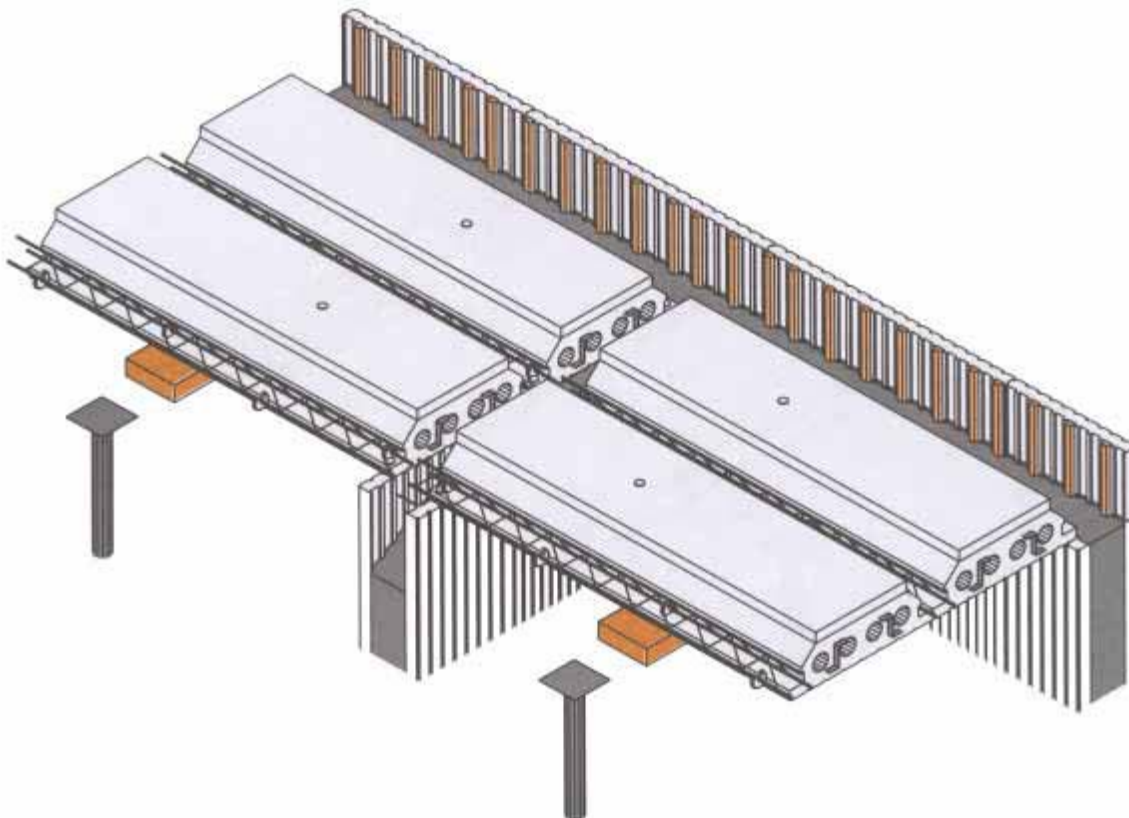
Pouring the floor



Floors

Floor assembly - Fig. 6

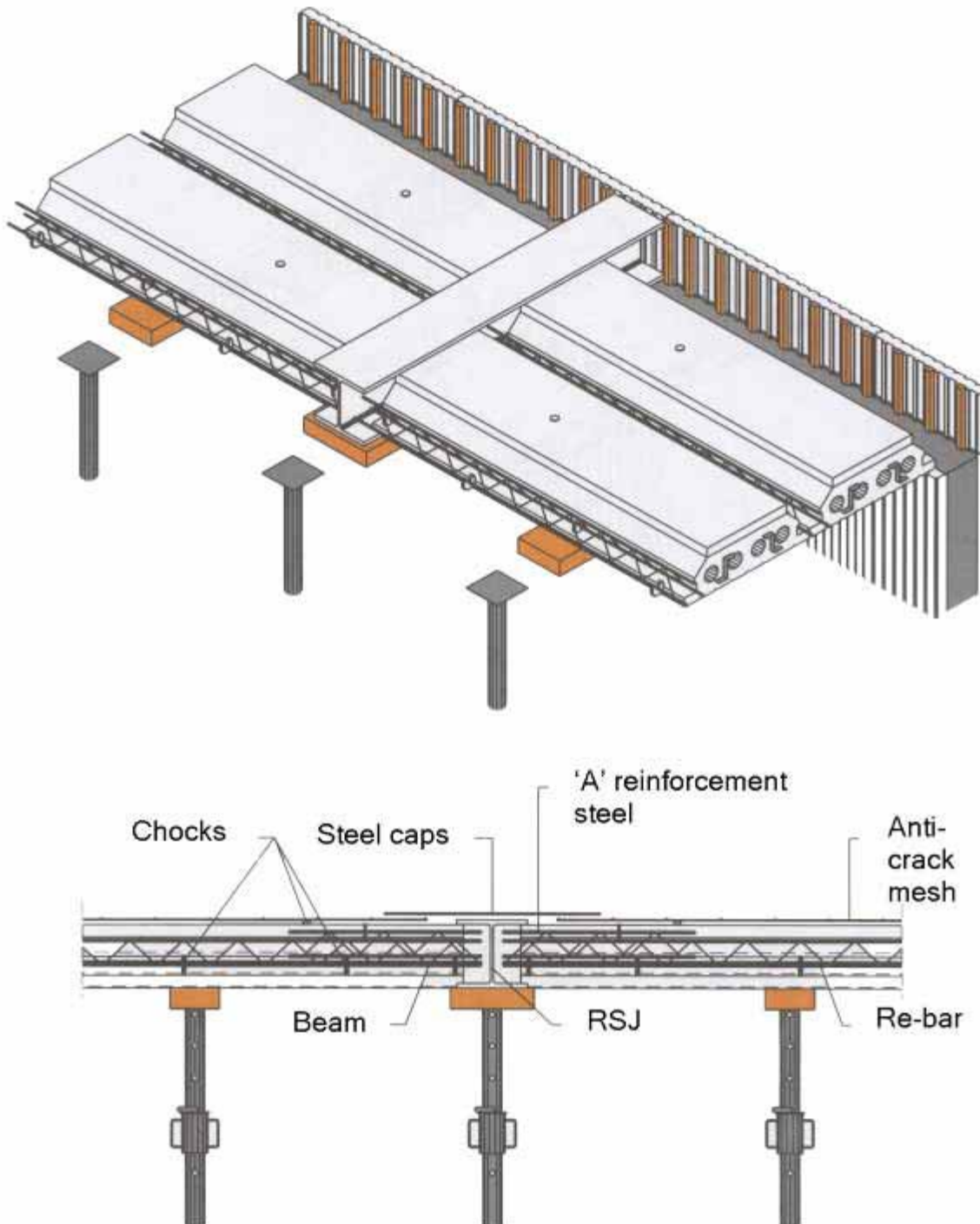
Laying of the floor on a dividing wall



Floors

Floor assembly - Fig. 7

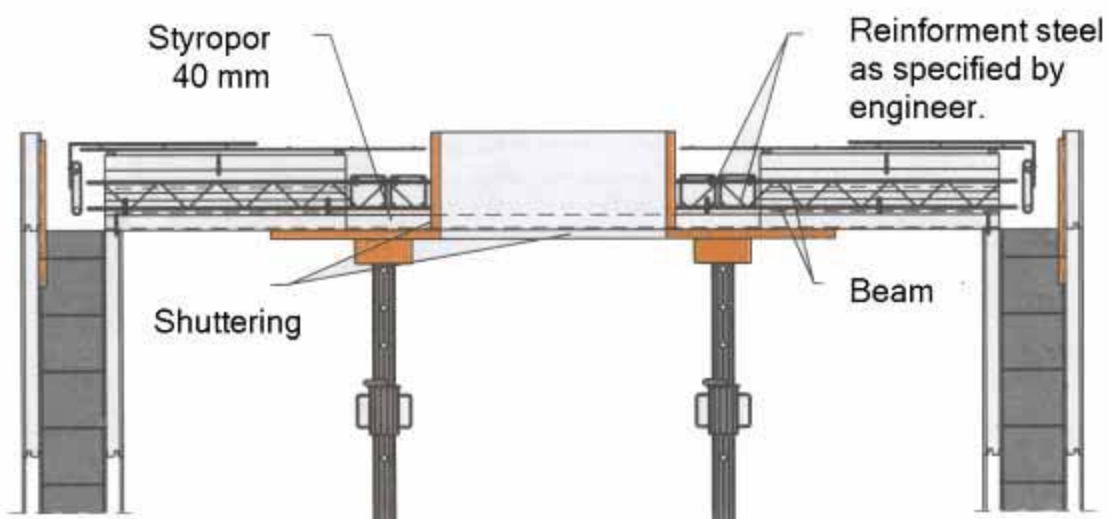
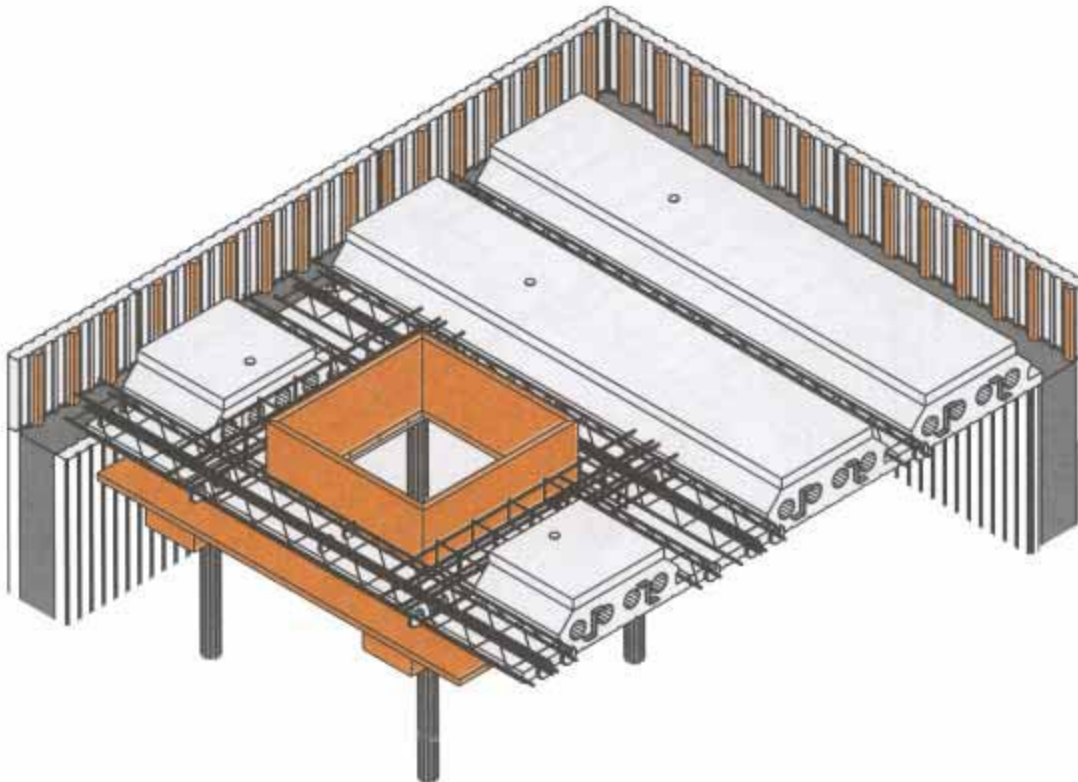
Laying of the floor on a RSJ



Floors

Floor assembly - Fig. 8

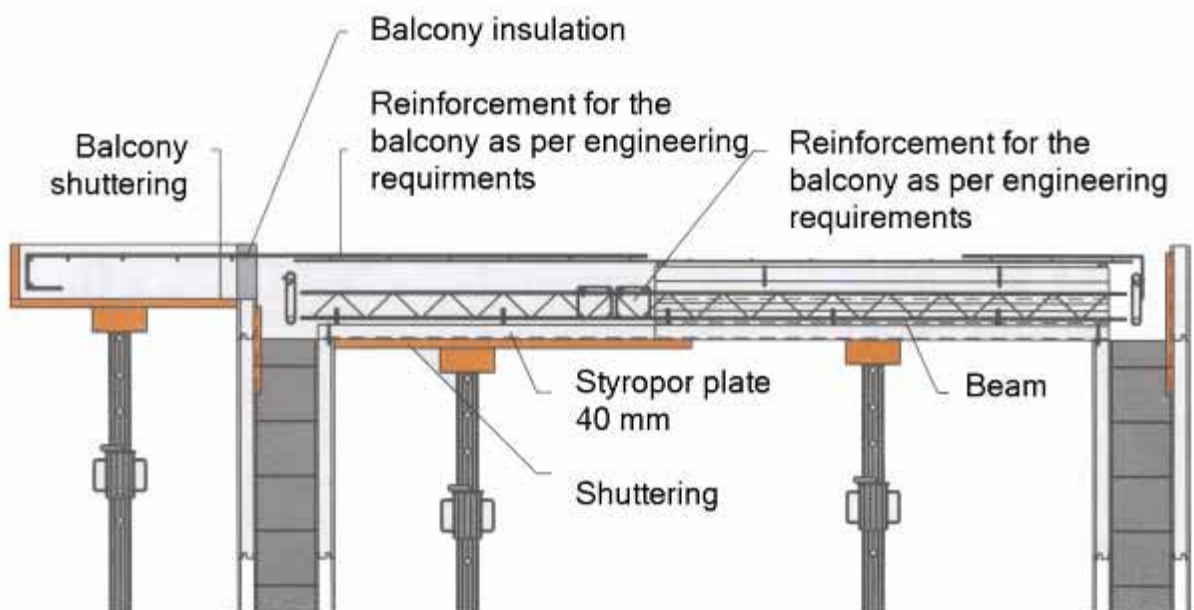
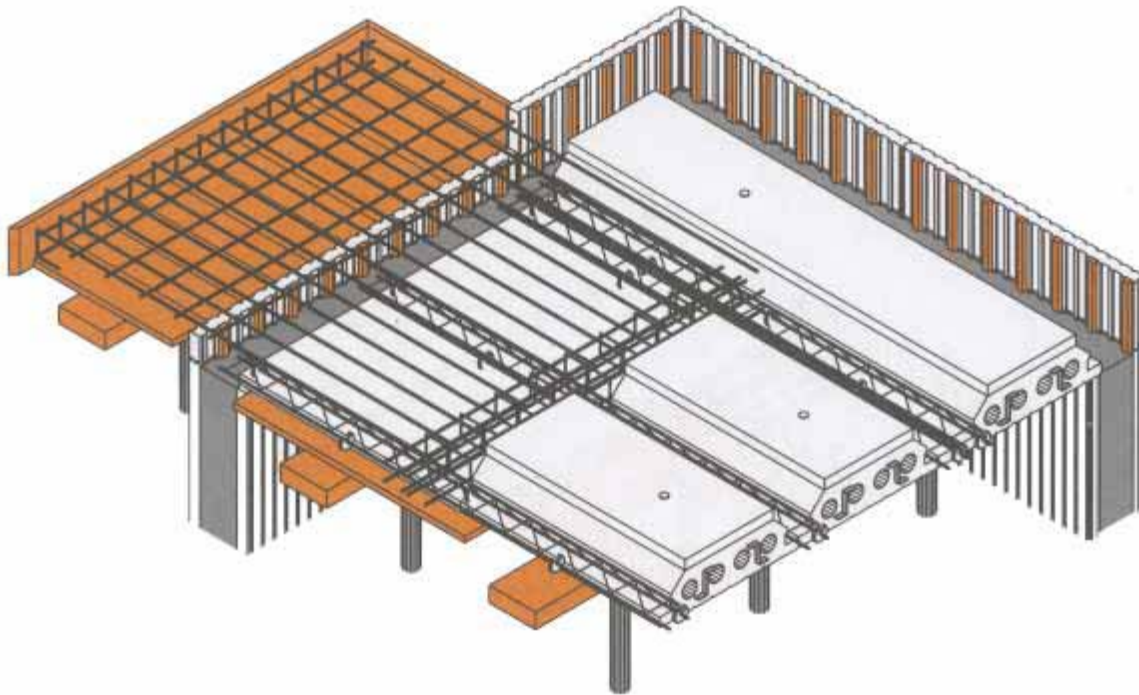
Shuttering an opening (e.g. stairs or attic opening).



Floors

Floor assembly - Fig. 8

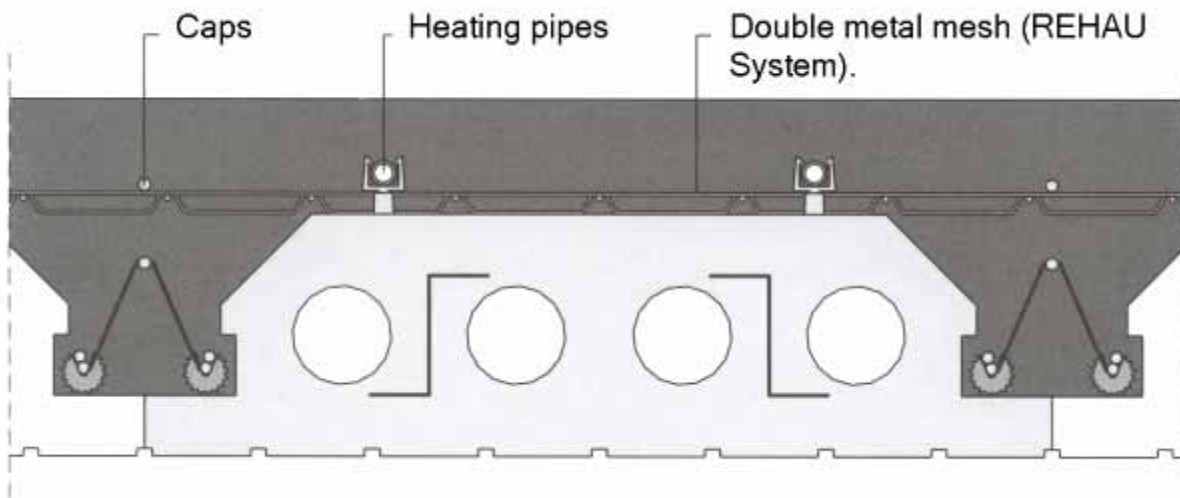
Cantilever balcony construction



Floors

Floor assembly - Fig. 8

Under floor heating directly over the insulating MHP element.



Floors

Reinforcement and slab thickness for standard domestic loadings.

Type	Free span in mm.	Length of reinforcement	Reinforcement		Floor Thickness in mm				Acros	Steel caps
			Basic Reinforcement 'A' frame	Additional reinforcement	MHP element	Lifter block	Concrete	TOTAL		
R10	900	920	2 x 6 mm bars	none	160	0	60	220	none	1 x 6 mm bar
R11	1,000	1,020	2 x 6 mm bars	none	160	0	60	220	none	1 x 6 mm bar
R12	1,100	1,120	2 x 6 mm bars	none	160	0	60	220	none	1 x 6 mm bar
R13	1,200	1,220	2 x 6 mm bars	none	160	0	60	220	none	1 x 6 mm bar
R14	1,300	1,320	2 x 6 mm bars	none	160	0	60	220	none	1 x 6 mm bar
R15	1,400	1,420	2 x 6 mm bars	none	160	0	60	220	none	1 x 6 mm bar
R16	1,500	1,520	2 x 6 mm bars	none	160	0	60	220	none	1 x 6 mm bar
R17	1,600	1,620	2 x 6 mm bars	none	160	0	60	220	none	1 x 6 mm bar
R18	1,700	1,720	2 x 6 mm bars	none	160	0	60	220	none	1 x 6 mm bar
R19	1,800	1,820	2 x 6 mm bars	none	160	0	60	220	none	1 x 6 mm bar
R20	1,900	1,920	2 x 6 mm bars	none	160	0	60	220	none	1 x 6 mm bar
R21	2,000	2,020	2 x 6 mm bars	none	160	0	60	220	1 row	1 x 6 mm bar
R22	2,100	2,120	2 x 6 mm bars	none	160	0	60	220	1 row	1 x 6 mm bar
R23	2,200	2,220	2 x 6 mm bars	none	160	0	60	220	1 row	1 x 6 mm bar
R24	2,300	2,320	2 x 6 mm bars	none	160	0	60	220	1 row	1 x 6 mm bar
R25	2,400	2,420	2 x 6 mm bars	none	160	0	60	220	1 row	1 x 6 mm bar
R26	2,500	2,520	2 x 6 mm bars	none	160	0	60	220	1 row	1 x 6 mm bar
R27	2,600	2,620	2 x 6 mm bars	1 x 6 mm bar @ 2,700 mm	160	0	60	220	1 row	1 x 6 mm bar
R28	2,700	2,720	2 x 6 mm bars	1 x 6 mm bar @ 2,700 mm	160	0	60	220	1 row	1 x 6 mm bar
R29	2,800	2,820	2 x 6 mm bars	1 x 6 mm bar @ 2,700 mm	160	0	60	220	1 row	1 x 6 mm bar
R30	2,900	2,920	2 x 6 mm bars	1 x 6 mm bar @ 2,700 mm	160	0	60	220	1 row	1 x 6 mm bar
R31	3,000	3,020	2 x 6 mm bars	1 x 6 mm bar @ 2,700 mm	160	0	60	220	1 row	1 x 6 mm bar
R32	3,100	3,120	2 x 6 mm bars	1 x 8 mm bar @ 3,400 mm	160	0	60	220	1 row	1 x 6 mm bar
R33	3,200	3,220	2 x 6 mm bars	1 x 8 mm bar @ 3,400 mm	160	0	60	220	1 row	1 x 6 mm bar
R34	3,300	3,320	2 x 6 mm bars	1 x 8 mm bar @ 3,400 mm	160	0	60	220	1 row	1 x 6 mm bar
R35	3,400	3,420	2 x 6 mm bars	1 x 8 mm bar @ 3,400 mm	160	0	60	220	1 row	1 x 6 mm bar

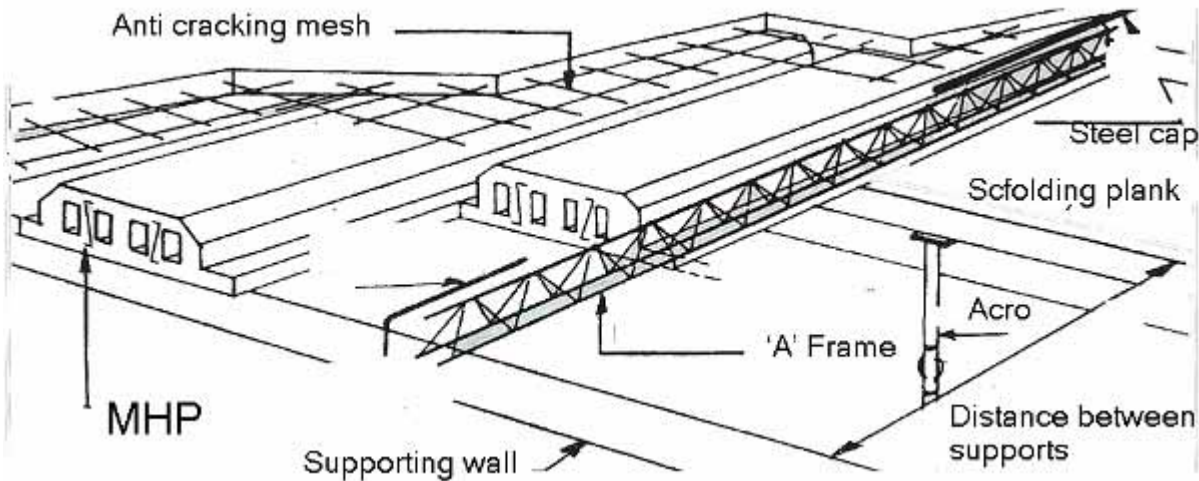
Floors

Type	Free span in mm.	Length of reinforcement	Reinforcement		Floor Thickness in mm				Acros	Steel caps
			Basic Reinforcement 'A' frame	Additional reinforcement	MHP element	Lifter block	Concrete	TOTAL		
R36	3,500	3,520	2 x 6 mm bars	1 x 10 mm bar @ 3,700 mm	160	0	60	220	1 row	1 x 6 mm bar
R37	3,600	3,620	2 x 6 mm bars	1 x 10 mm bar @ 3,700 mm	160	0	60	220	1 row	1 x 6 mm bar
R38	3,700	3,720	2 x 8 mm bars	1 x 6 mm bar @ 2,700 mm	160	0	60	220	1 row	1 x 6 mm bar
R39	3,800	3,820	2 x 8 mm bars	1 x 6 mm bar @ 2,700 mm	160	0	60	220	1 row	1 x 6 mm bar
R40	3,900	3,920	2 x 8 mm bars	1 x 8 mm bar @ 3,400 mm	160	0	60	220	1 row	1 x 6 mm bar
R41	4,000	4,020	2 x 8 mm bars	1 x 8 mm bar @ 3,400 mm	160	0	60	220	2 rows	1 x 6 mm bar
R42	4,100	4,120	2 x 8 mm bars	1 x 8 mm bar @ 3,400 mm	160	0	60	220	2 rows	1 x 6 mm bar
R43	4,200	4,220	2 x 8 mm bars	1 x 10 mm bar @ 3,700 mm	160	0	60	220	2 rows	1 x 8 mm bar
R44	4,300	4,320	2 x 8 mm bars	1 x 10 mm bar @ 3,700 mm	160	0	60	220	2 rows	1 x 8 mm bar
R45	4,400	4,420	2 x 8 mm bars	1 x 10 mm bar @ 3,700 mm	160	40	60	260	2 rows	1 x 8 mm bar
R46	4,500	4,520	2 x 8 mm bars	1 x 10 mm bar @ 3,700 mm	160	40	60	260	2 rows	1 x 8 mm bar
R47	4,600	4,620	2 x 8 mm bars	1 x 10 mm bar @ 3,700 mm	160	40	60	260	2 rows	1 x 8 mm bar
R48	4,700	4,720	2 x 8 mm bars	1 x 10 mm bar @ 3,700 mm	160	40	60	260	2 rows	1 x 8 mm bar
R49	4,800	4,820	2 x 8 mm bars	1 x 10 mm bar @ 3,700 mm	160	40	60	260	2 rows	1 x 8 mm bar
R50	4,900	4,920	2 x 8 mm bars	1 x 12 mm bar @ 4,500 mm	160	40	60	260	2 rows	1 x 8 mm bar
R51	5,000	5,020	2 x 8 mm bars	1 x 12 mm bar @ 4,500 mm	160	40	60	260	2 rows	1 x 8 mm bar
R52	5,100	5,120	2 x 10 mm bars	1 x 10 mm bar @ 3,700 mm	160	40	60	260	2 rows	1 x 8 mm bar
R53	5,200	5,220	2 x 10 mm bars	1 x 10 mm bar @ 3,700 mm	160	40	60	260	2 rows	1 x 8 mm bar
R54	5,300	5,320	2 x 10 mm bars	1 x 10 mm bar @ 3,700 mm	160	40	60	260	2 rows	1 x 8 mm bar
R55	5,400	5,420	2 x 10 mm bars	1 x 10 mm bar @ 3,700 mm	160	40	60	260	3 rows	1 x 8 mm bar
R56	5,500	5,520	2 x 10 mm bars	1 x 10 mm bar @ 3,700 mm	160	80	60	300	3 rows	1 x 8 mm bar
R57	5,600	5,620	2 x 10 mm bars	1 x 10 mm bar @ 3,700 mm	160	80	60	300	3 rows	1 x 8 mm bar
R58	5,700	5,720	2 x 10 mm bars	1 x 10 mm bar @ 3,700 mm	160	80	60	300	3 rows	1 x 8 mm bar
R59	5,800	5,820	2 x 10 mm bars	1 x 10 mm bar @ 3,700 mm	160	80	60	300	3 rows	1 x 8 mm bar
R60	5,900	5,920	2 x 10 mm bars	1 x 10 mm bar @ 3,700 mm	160	80	60	300	3 rows	1 x 8 mm bar
R61	6,000	6,020	2 x 10 mm bars	1 x 12 mm bar @ 4,500 mm	160	80	60	300	3 rows	1 x 8 mm bar
R62	6,100	6,120	2 x 10 mm bars	1 x 12 mm bar @ 4,500 mm	160	80	60	300	4 rows	1 x 8 mm bar
R63	6,200	6,220	2 x 10 mm bars	1 x 12 mm bar @ 4,500 mm	160	80	60	300	4 rows	1 x 8 mm bar
R64	6,300	6,320	2 x 10 mm bars	1 x 12 mm bar @ 4,500 mm	160	80	60	300	4 rows	1 x 8 mm bar

Larger spans upto 7,500 mm details on request.

Floors

Technical description and installation of the floor - Fig 1



Performance

Mechanical strength - the strength is calculated as per a conventional ribbed floor.

Values

$$R_u = 2.26 \text{ m}^2 \text{ } ^\circ \text{ C/W}$$

$$K\text{-value} = 3,3 \text{ w:m}^2 \text{ } ^\circ \text{ C}$$

(used in all areas)

The fire resistance will be calculated as per a concrete floor.

Fire resistance of styropor: M1

Fire resistance of styropor with plaster: M0

Our slab can be used in residential and commercial buildings, with a equally spread loading requirement as follows

- 545 kg/m² with a height of 160 mm (MHP) and 60 mm of Concrete.
The beam has a thickness of 180 mm of concrete

Own weight	=	190 kg/m ²
Finish (Parquet, tiles, carpets)	=	60 kg/m ²
Plaster	=	15 kg/m ²
Internal partition walls	=	100 kg/m ²
Remaining free loading 140 x 1.20	=	168 kg/m ²

- 585 kg/m² with a height of 200 mm (MHP) and 60 mm of Concrete.
The beam has a thickness of 220 mm of concrete

Own weight	=	230 kg/m ²
Finish (Parquet, tiles, carpets)	=	60 kg/m ²
Plaster	=	15 kg/m ²
Internal partition walls	=	100 kg/m ²
Remaining free loading 150 x 1.20	=	180 kg/m ²

Floors

-	620 kg/m ² with a height of 240 mm (MHP) and 60 mm of Concrete.	
	The beam has a thickness of 260 mm of concrete	
	Own weight	= 265 kg/m ²
	Finish (Parquet, tiles, carpets)	= 60 kg/m ²
	Plaster	= 15 kg/m ²
	Internal partition walls	= 100 kg/m ²
	Remaining free loading 150 x 1.20	= 180 kg/m ²

Note

The steel beams area 600 mm centers

Allowed spans of the steel + additional inserts = 3330 kg/cm² (steel DAFIL 500)

Basic steel - see table.

Four types of additional steel - see table

Positioning of the steel - minimum 15 mm above the styropor.

For openings calculated steel supports

Strength of installed steel from slab end to wall = 2800 kg/m²

For additional slab strength (40 mm for 160 mm + 50 mm - 80 mm for 200 mm + 50 mm) the additional element must be attached to the main part of the slab, to reduce any additional risk the slab should be poured as one.

General assembly notes (for full installation instructions see "Installation of the Floor")

1. Ensure the walls are level
2. Install the acros
3. Install the MHP element
4. If required add additional lifters
5. Install the 'A' frame steel beams plus an additional re bars as specified
6. Install the ring beam - if specified.
7. Install the anti cracking mesh
8. Install the steel caps
9. Pour the concrete.

DETAILS OF THE SUPPORTS

Maximum 1200 mm centers

CONCRETE

Concrete class	-	N25
Volume requirement	-	basic 0.08 m ³ per m ²

Each square meter of the floor requires 0.08 m³, plus the cover over walls, stair wells. RSJ etc. for each cm of lifter block the concrete requirement increase by 0.004 m³.

For example

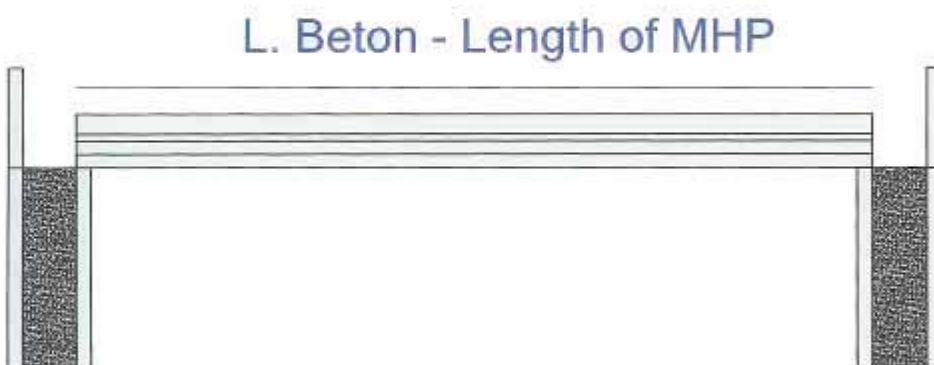
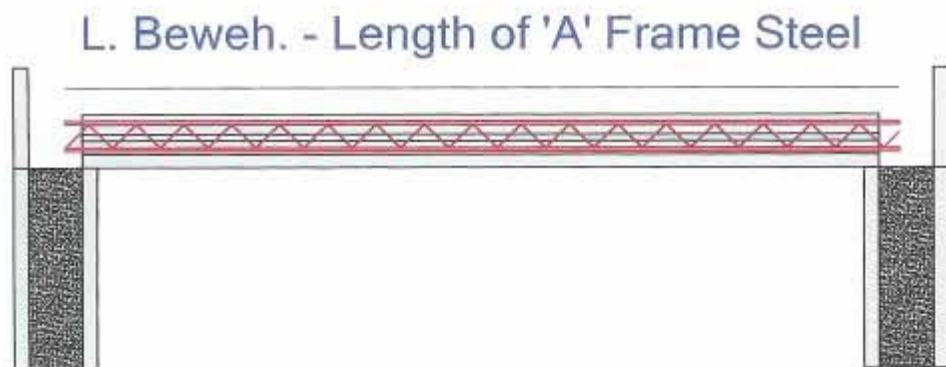
MHP	-	160 mm
Lifter block	-	40 mm
Concrete cover	-	60 mm
Slab thickness	-	260 mm

$$0.08 \text{ m}^3 + 0.016 = 0.096 \text{ m}^3$$

$$\text{For a floor area of } 100 \text{ m}^2 = 9.6 \text{ m}^3 \text{ of concrete.}$$

Floors

Example of layout drawing



Floors

		36, Route de Thionville BP 723 57147 WOIPPY Cedex		DATUM 17/02/2004							
				VERLEGE- PLAN Nr. 04-0142-A				Carreau de la mine BP 22 57730 FOLSCHVILLER Tél: 03 87 91 16 00 Fax: 03 87 91 03 31			
TELE : 03 87 31 82 63 FAX : 03 87 31 82 58 ZULASSUNGSNUMMER : Z-15.J-155 INSITUT FUR BAUTECHNIK BERLIN : 30/7/99											
KUNDE FIRMA RBMH BAUSTELLE				PRUFSTATIK GEBAUDE GESCHOSS UBER DECKE EG							
TYPENLISTE BEWEHRUNG " PLANCHERS ACOR " BEWEHRUNG FeE500						ZONE 0					
MONTAGE		MITTENABSTAND		Eigengewicht (daN/m ²)		Fußboden+Putz		Trennwand		Frei tragkraft	
MHP 4+12+4+5		60		226		165		125		150	
Knz.	Mge	Frei span.	L. beton	L. beweh.	Ø Basis	Axiale Verstärkung			Verstärkung gegen Scherkraft		
A	13	4,16	4,26	4,40	2Ø8	1Ø12x4,60	1Ø12x4,60	1Ø12x4,60			
B	6	4,15	4,25	4,40	2Ø8	1Ø12x4,60	1Ø12x4,60				
C	11	4,02	4,12	4,30	2Ø8	1Ø10x3,70	1Ø10x3,70				
D	10	3,90	4,00	4,20	2Ø8	1Ø10x3,70	1Ø10x3,70				
E	13	3,89	3,99	4,20	2Ø8	1Ø10x3,70					
F	5	3,66	3,76	3,90	2Ø8	1Ø10x3,70					
G	8	0,80	0,90	1,10	2Ø6						
ABDECKHAUBE Gewicht : 0,29 kg/m ²						STAHLMATTE ST10 184,07 m ² (16 S)					
Knz.	Mge	Durchmesser/Länge		Ausschnitt		ZWISCHENTRAGER				MENGE	
a	116	HA8	0,90	0,15	0,75						
										BETON MENGE (Ohne ringanker) m ³	
										FLACHE m ²	
										RINGANKER Lg 6 m	
										DECKESCHALUNGSELEMENT Stuck	
										Ø10 x 3,70 m 60 S	
										Ø12 x 4,60 m 51 S	

Floors

