# HTOPMAX <br> Steel Frame Table Form 

## User guide



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## 1 Product features

The TOPMAX floor table system from Hünnebeck is a fast and economical floor table system for large-area slabs with a thickness of up to 500 mm and a clear room height of up to 7.62 m . Slabs up to 500 mm thick meet the requirements of line 7 of DIN 18202. Thicker slabs can be achieved by statical calculations.

The TOPMAX floor table system consists of a robust and hot-dip galvanized steel frame with a concrete-repelling powder coating. The high-performance full plastic form sheet is protected by the steel frame of the panel providing an even concrete face of the highest quality and reducing the refinishing work to a minimum.

The optimized combination of steel and plastic turns TOPMAX into a long-lasting and high-quality floor table system.

The TOPMAX floor tables are supported by the standard props of Hünnebeck.
TOPMAX floor tables are available in the dimensions $2.40 \times 5.40 \mathrm{~m}$ and $1.80 \times 5.40 \mathrm{~m}$ achieving formed areas of $12.96 \mathrm{~m}^{2}$ and $9.72 \mathrm{~m}^{2}$.

Two floor tables with an area of up to $25.92 \mathrm{~m}^{2}$ can be lifted by crane in just one pick.
The props are connected to the tables with the TOPMAX Folding Head. The integrated folding mechanism allows swivelling the mounted props over parapets or other obstacles easily and quickly without removing the props.

TOPMAX also includes a system solution for the forming of slab edges almost completely without nailing.

TOPMAX floor tables are compatible with the Hünnebeck wall formwork RASTO/TAKKO and with the TOPEC slab formwork system. That extends the range of additional system solutions for infill areas.

TOPMAX is also compatible with the PROTECTO and EXTRAGUARD edge protection systems and provides that way a maximum of safety.

### 1.1 Intended use

The typical assembly shown in this user guide is intended to form large area slabs and to transfer the resulting horizontal and vertical loads into the ground.

A system based slab edge formwork, working platforms and compatibility to RASTO/ TAKKO, TOPEC, PROTECTO and EXTRAGUARD expand the functionality and range of use.

The permitted loads have to be observed.
Hünnebeck products are intended exclusively for commercial use by technically suitable users.

This user guide is intended for commercial users with appropriate technical training. The contents and processes described are in accordance with the legal and occupational safety regulations. Hünnebeck assumes no liability for deviations from the contents and processes described or for use outside this area of application.

## 2 General information


#### Abstract

This user guide for assembly and use contains important information regarding the assembly and use of the TOPMAX system, as well as safety advice. These instructions are created to support effective working processes on site when using the TOPMAX system, therefore carefully read this user guide before assembly and use of the system, always keep it at hand and archive it for future reference.


### 2.1 Safety instructions

It is the responsibility of the site Management / Supervisors to ensure that all operatives involved in the assembly of the TOPMAX system have been made aware of this document and that they understand the drawings and the function of the various components. The Contractor is also responsible for drawing up a comprehensive risk assessment and a set of installation instructions. The latter is not usually identical to the assembling instructions.

## Risk assessment

The Contractor is responsible for the compilation, documentation, implementation and revision of a risk assessment for each construction site. His / her employees are obliged to implement the resulting measures in accordance with all legal requirements.

## Assembly instructions

The assembly instructions are an integral component of the TOPMAX construction and are a part of the installation instructions. They comprise safety guidelines, details of standard configurations and intended use as well as the system's description. The functional instructions (standard configuration) contained in the assembly instructions are to be complied with as stated. Enhancements, derivations or changes represent a risk and therefore require separate verification with the help of a risk assessment or a set of instructions which comply with the relevant laws, standards and safety regulations. The same also applies in those cases where components are provided by the Contractor.

## Availability of the assembly instructions

The Contractor has to ensure that the assembly instructions provided by the manufacturer or supplier are available at the place of use. Site personnel are to be informed of this before assembly and use takes place and that they are available at all times.

## Detailed assembly

The method of erection / dismantling detailed is intended to be used as a general guide to inform the user about the product's details to enable safe use. It must not be used as a substitute for a contractor's specific risk assessment and method statement, and all relevant health and safety regulations must be adhered to. Due to the variety of possible configurations of temporary work systems, the method of erection or parts of it may differ from that shown. Additionally, alternative methods of erection may be preferred or developed in which case it is imperative that all relevant health and safety legislation is adhered to.

### 2.2 Method Statement guidelines

Hünnebeck can provide further guidance and on-site assistance on any issues contained in this document that are not clear. Further information can be found in the product's data sheets. IF IN DOUBT ASK.

## Design Risk Assessment

Where relevant site-specific scheme designs are produced, they will generally be to a recognised standard arrangement otherwise calculations will be done to verify the design.

The Design Risk Assessment is an integral part of Hünnebeck's design process.
The designer will assess the hazards and risks associated with erection, use and dismantling of the temporary works at an early stage of the design process.

Hünnebeck will communicate where risks to health and safety remain by including a "Residual Risk Note" on the drawing. This note will be clearly visible and marked by the familiar black exclamation mark on a yellow triangle. The statement will be brief but clear to enable appropriate action by a competent contractor.

Hünnebeck draws attention to the following Health and Safety legislation:
The Construction (Health, Safety and Welfare) Regulations 1996 (CHSW Regs);
Construction (Design and Management) Regulations 2015 (CDM Regs);
Lifting Operations and Lifting Equipment Regulations 1998 (LOLER);
Work at Height Regulations 2005 (WaH Regs);
Manual Handling Operations Regulations 1992 (MHO Regs).
The Personal Protective Equipment at Work Regulations 1992 (PPE Regs)

## Work at Height Regulations - Hierarchy of Controls Avoiding Work at Height

Work at height can be reduced / eliminated by considering the method of assembly and use:

- Edge protection that is designed to be re-used reduces the amount of time and effort required for dismantling and re-erecting;
- Installing completed edge protection when the formwork is on the ground will remove work at height associated with the construction later on.


## Preventing Falls - The use of guardrails and other collective measures The use of PPE / Safety Harnesses.

Suitable PPE MUST be used at all times during assembly and dismantling of this equipment. Lanyards MUST always be secured to a suitable part of the structure. or certified anchor point of other equipment. Always consider the attachment level and deployment (extension) of the lanyard when under load.

### 2.3 Equipment information

Material deliveries are to be checked on arrival at the construction site / place of destination, as well as before each use, to ensure it's in serviceable condition and functions correctly. Changes to the material are not permitted.

## On-site preparations

The Contractor must ensure the appropriate environment and conditions for storage and the particular application of the system(s) supplied.

## Storage and transportation

The special requirements of the TOPMAX system either as individual components and/ or as pre-assembled parts regarding storage and transportation procedures must be complied with. This applies not only to and from the site but also to the movement of individual components and / or pre-assembled parts on the construction site / place of use.

## Lifting

When applicable, the lifting requirements of the individual components and / or preassembled parts must be followed.

## Genuine components

The information provided assumes that any product combinations will be between genuine Hünnebeck products or products supplied by Hünnebeck unless otherwise stated.

Combining components from different manufacturers carries certain risks. They are to be individually verified and a separate set of instructions for the installation of the equipment may be required.
Any unauthorised use in relation to third party products could give rise to a risk of collapse, damage, injury or death.

## Spare parts and repairs

Only original components may be used as spare parts. Repairs are to be carried out by the manufacturer or by authorised facilities only.

### 2.4 Document information

## Representations

The representations shown in the assembly instructions are in part, situations of assembly and not always complete in terms of safety considerations. The safety installations which have possibly not been included in these representations must be available and must be in accordance with the latest regulations. Overviews and diagrams are for illustrative purposes only and whilst we endeavour to ensure accuracy, we are not responsible for omissions or errors.

## Safety symbols

Individual safety symbols are to be complied with. Examples:

| DANGER | Danger! <br> DANGER indicates a hazardous situation that, if not avoided, will cause death or <br> serious injury. |
| :--- | :--- |


| Warning! |
| :--- | :--- |
| WARNING indicates a hazardous situation that, if not avoided, can cause death or |
| serious injury. |


| NOTICE | Notice! <br> NOTICE indicates a hazardous situation that, if not avoided, can cause property <br> damage. |
| :--- | :--- |

This note indicates that an additional check, visual or otherwise, is required.
This note shares practical experience with the user, e.g. how to more easily or quickly
perform a task.

| $\frac{2}{3}$ | This note draws the user's attention to particularly important information, e.g. that a <br> pre-requisite must be fulfilled. |
| :--- | :--- |

This symbol indicates that additional information from other documents is required.
These documents could be user guides or operating instructions for other products.

## User guide compliance

Hünnebeck will not be liable for any damage to property, personal injury or any losses caused by failure to follow the instructions contained in this guide. It remains the
responsibility of the user to comply with the applicable legislation.

### 2.5 Other information

This guide provides an overview of the TOPMAX system's instructions for assembly and use. More specific component data sheets are available upon request for some product lines. Hünnebeck reviews and updates its product guidance from time to time. Due to continuous development, it is important that only current documents are used.

Hünnebeck reserves the right to alter or amend, without notice, the design and/or specifications of products in the interests of improvement or when required to comply with new regulations, other safety guidances or industry advancements.

Hünnebeck also issues safety notes on its products or packaging where required. These notices may affect the manner in which products are used and should therefore be adhered to. The most recent published notice should prevail.

All information in this guide is correct at the time of going to press and / or other publication media.

For the latest version of this and other user guides please visit:
http://huennebeck.com/downloads


SGB, Hünnebeck, ALUMA and BRAND are trading names of BRANDSAFWAY.

## 3 Overview



## 4 Components

### 4.1 Core components



|  | TOPMAX Floor Table $1.8 \times 5.4 \mathrm{~m}$ <br> Floor table with a forming area of $9.72 \mathrm{~m}^{2}$. | 603185 | 421.88 |  |
| :--- | :--- | :--- | :--- | :--- |
| See page 26. |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

### 4.2 Ancillary components

| Component | Part code |
| :--- | :--- |
|  | Centering Tension Bolt |
| Used in combination with the Centering |  |
| Nut 100 as a tensile connection between |  |
| the TOPMAX Floor Tables and when |  |
| combining TOPMAX and RASTO panels. |  |
| It is positioned through the hole pattern in |  |
| the edge profile of the panels to achieve a |  |
| flush panel joint. |  |

## Centering Nut 100

469566


Used to secure tensile connections.
See page 28.


Component
Part code
Weight [kg]
TOPMAX Timber Holder
603235
0.72

Connects to the holes on the edge profiles and supports $80 \times 100 \mathrm{~mm}$ timber for plywood infills.
Safe Working Load: 1.90 kN .
See page 86.


## TOPMAX Extension Frame

603479
165.64

The TOPMAX Extension Frame is used at building sites with greater slab heights of up to 7.62 m (clear floor height). The frame enables the re-use of props for typical lower areas in the non-typical higher areas without exchanging the entire falsework system.
Used in conjunction with the Diagonal 203.
See page 45 .


Diagonal 203
This diagonal is used to stiffen the TOPMAX Extension Frame.
Each TOPMAX Extension Frame requires
2no. Diagonal 203 and 4no. TOPMAX
Locking Pins.
See page 45.

|  | Component |
| :--- | :--- |
|  | Part code |
| TOPMAX Stopend Adjuster | Weight [kg] |

### 4.3 Adapters, bearings and props

| Component | Part code |
| :--- | :--- |
|  | $\mathbf{6 0 2 5}$ |
|  | TOPMAX Folding Head |
| This item is used for connecting |  |
| EUROPLUSnew props to the TOPMAX |  |

## TOPMAX Locking Pin



The self-locking pin secures the TOPMAX Folding Head to the TOPMAX Floor Table at the predetermined standard positions.
Part code
Component
TOPMAX Connection Bearing
This part is used to support TOPEC
formwork that can be connected to
TOPMAX Floor Tables.
An additional suitable TOPEC bolt is
required to secure it to the EUROPLUSnew
Props.
See page 103.

| Component | Part code | Weight [kg] |
| :---: | :---: | :---: |
| EUROPLUSnew 20-250* | 601390 | 13.15 |
| ( 1470 mm - 2500 mm) |  |  |
| EUROPLUSnew 20-300* | 601400 | 16.82 |
| ( 1720 mm - 3000 mm ) |  |  |
| EUROPLUSnew 20-350* | 601410 | 20.52 |
| ( 1980 mm - 3500 mm) |  |  |
| EUROPLUSnew 20-400* | 601415 | 23.79 |
| ( 2240 mm - 4000 mm ) |  |  |
| EUROPLUSnew 20-550* | 601425 | 36.07 |
| ( 3030 mm - 5500 mm) |  |  |
| EUROPLUSnew 30-150** | 601460 | 10.68 |
| ( 1040 mm - 1500 mm ) |  |  |
| EUROPLUSnew 30-250** | 601430 | 16.19 |
| ( 1470 mm - 2500 mm ) |  |  |
| EUROPLUSnew 30-300** | 601440 | 19.17 |
| ( 1720 mm - 3000 mm) |  |  |
| EUROPLUSnew 30-350** | 601445 | 24.24 |
| ( 1980 mm - 3500 mm ) |  |  |
| EUROPLUSnew 30-400** | 601450 | 28.75 |
| ( 2240 mm - $\mathbf{4 0 0 0}$ mm) |  |  |
| All steel props are hot-dip galvanized and have a quick-lowering mechanism and an anti-crush guard as well. Additionally the props have a protection to prevent the sliding-out of the inner tube. |  |  |
| *Safe Working Load (as single prop): 20.00 kN (class D) |  |  |
| **Safe Working Load (as single prop):$30.00 \text { kN (class D) }$ |  |  |
| See page 29. |  |  |

### 4.4 Tripods

| Component | Part code | Weight [kg] |
| :--- | :--- | ---: | ---: |

### 4.5 Stabilizers




Panel Anchor Bracket
605999
2.27

The Panel Anchor Bracket is used to provide horizontal restraint to TOPMAX tables.
The bracket has 2 no. $\varnothing 18$ holes on opposite sides (one hole not visible), for locating the anchor. The larger $\varnothing 36$ holes are placed to allow the spanner extension to pass through.

See page 81.


Used to temporarily secure the Panel
Anchor Bracket to the existing structure.
Only one bolt is required per bracket.
See page 81.

|  | Component | Part code | Weight [kg] |
| :--- | :--- | :---: | ---: |
|  | MMS+16 Thread Checking Gauge | 443501 | $\mathbf{0 . 0 4}$ |
|  | Used for reusability check of the Anchor |  |  |
| Bolt MM+SSK $16 \times 130$. |  |  |  |
| See page 84. |  |  |  |

4.6 Working platforms

| Part code | Weight [kg] |
| :--- | :--- |

### 4.7 Edge protection

| Component | Part code |
| :--- | :--- | Weight [kg]



## PROTECTO Post 130 Adjustable

The PROTECTO Post 130 Adjustable is used in combination with the PROTECTO Panel G2.
An integrated safety device secures the post automatically to the various retaining elements.

The PROTECTO Post 130 Adjustable complies with BS EN 13374 Class A when used with the PROTECTO Panels G2.

| Component | Part code |
| :--- | :--- | | PROTECTO Railing Post |
| :--- |
| The PROTECTO Railing Post is used |
| in conjunction with the PROTECTO |
| Panels G2 and plank railings. An |
| integrated safety device secures the post |
| automatically to the various retaining |
| elements. |
| The PROTECTO Railing Post complies |
| with EN 13374 when used with the |
| PROTECTO Panels G2 and plank railings. |
| The planks used for railing must be |
| 30 mm thick, 150 mm high and meet |
| the requirements of strength class C24 |
| according to EN 338 (formerly S10). |
| Refer to page 210. |

Component
EXTRAGUARD Guardrail Post 1.25 m
Used in conjunction with the TOPMAX
EXTRAGUARD Socket Base to provide
edge protection at the leading edges of
the TOPMAX Floor Tables.
See page .

### 4.8 Table transport

|  | Component | Part code | Weight [kg] |
| :---: | :---: | :---: | :---: |
|  | Multi Mover | 607150 | 1,630.00 |
|  | Used to lift, lower and move TOPMAX Floor Tables between 2.00 m and 4.50 m high. |  |  |
|  | Can be used with Extension Frames for heights of up to 7.50 m . |  |  |
|  | Dimensions: |  |  |
|  | $\mathrm{H}=1.98 \mathrm{~m}$ |  |  |
|  | $\mathrm{L}=1.80 \mathrm{~m}$ |  |  |
|  | $\mathrm{D}=1.00 \mathrm{~m}(1.80 \mathrm{~m}$ with the extended outriggers). |  |  |
|  | Positioning Tubes and Locking Pins are included. |  |  |
|  | TOPMAX Turning Heads and Rea |  |  | Springs must be ordered separately. See page 110.



## Turning Head Set

607160
28.72

Used with the Multi Mover to provide a support surface.
Includes 4no. TOPMAX Turning Head (code:603237) and 4no. Readjusting Spring (code:603303).

Component
Used to brace the Multi Mover Extension
Frame.
Each frame requires 2no. guardrails.
See page 121.

### 4.9 Lifting

| Component | Part code |
| :--- | :--- |
| TOPMAX Crane Suspension | 603050 |
| Used in groups of four units, it allows to |  |
| use a crane to load and unload a single |  |
| TOPMAX Floor Table or bundles of up to |  |
| 4no. tables. |  |
| Safe Working Load: 5.00 kN (per unit). |  |
| See page 144. |  |

TOPMAX Lifting Fork
The TOPMAX Lifting Fork is used to
transport TOPMAX Floor Tables by crane.
Two tables up to $26.00 \mathrm{~m}^{2}$ can be moved in
just one pick.
Supplied with 2no. Lifting Stopends and
4no. TOPMAX Spacer Plugs.
Working Load Limit: 12.50 kN.
TOPMAX Spacer Plug Adapter
Used with the TOPMAX Lifting Fork for
longitudinal transport of TOPMAX Floor
Tables $1.80 \times 5.40 \mathrm{~m}$.
This item is not supplied with the TOPMAX
Lifting Fork and needs to be ordered
separately. An additional TOPMAX Locking
Pin is required to be ordered separately as
well.

|  | Component | Part code | Weight [kg] |
| :---: | :---: | :---: | :---: |
|  | TOPMAX Lifting Fork Vertical Post 600 <br> The UG Vertical Post 600 is an accessory part for the TOPMAX Lifting Fork. It is used when the opening width of the TOPMAX Lifting Fork ( 2.40 m ) is not sufficient to access TOPMAX tables from above by crane, i.e. at high parapets and obstacles or when removing tables at double floors. <br> With the UG Vertical Post 600, the TOPMAX Lifting Fork can have a maximum width of 5.90 m . <br> Working Load Limit: 12.50 kN . <br> See page 148. | 603596 | 421.47 |
|  | TOPMAX Table Lifting System <br> Used to move TOPMAX tables between floors. In the basic configuration a height of 7.00 m can be reached. <br> Basic system consisting of: 1no. basic unit <br> 2no. pylon anchors <br> 2no. cable guide bracket <br> 1no. floor level stop bracket <br> 12no. triangle lattice tower <br> 2no. end switch guide plate <br> Maximum load carrying capacity: <br> during transport $=1,685.00 \mathrm{~kg}$ <br> during loading $=2,370.00 \mathrm{~kg}$. <br> * Not readily available. | 603500 | 4022.00 |

### 4.10 Tools

| Component | Part code |
| :--- | :--- |

### 4.11 Storage

|  | Component | Part code |
| :--- | :--- | :--- | Weight [kg]

For more information regarding the Euro Trolley refer to the separate Operating Instructions!


## Euro Lattice Box

548480
68.79

Lattice box used to store and transport small items by crane.
Can be moved using the Euro Trolley.
Safe Working Load: $1,200 \mathrm{~kg}$.

## Euro Stacking Frame 120/80

553689
54.47

Stacking frame used to store and transport

materials by crane.
Can be moved using the Euro Trolley.
Safe Working Load: 1,200 kg.


## Applications

## 5 Applications

### 5.1 TOPMAX Floor Tables

### 5.1.1 TOPMAX Floor Table $2.4 \times 5.4$ m



| TOPMAX Floor Table $\mathbf{2 . 4 \times 5 . 4 \mathbf { ~ m }}$ |  |
| :---: | :---: |
| DIN EN $\mathbf{1 2 8 1 2}$ |  |
| Slab thickness <br> d [mm] | Prop load <br> $\mathrm{A}[\mathrm{kN}]$ |
| 100 | 14.59 |
| 150 | 18.64 |
| 200 | 22.69 |
| 250 | 26.74 |
| 300 | 30.79 |
| 350 | 35.25 |
| 400 | 39.70 |
| 450 | 44.16 |
| 500 | 48.61 |



Check additional prop loads at the infill areas, see section regarding infills starting on page 86.

### 5.1.2 TOPMAX Floor Table $1.8 \times 5.4$ m



| TOPMAX Floor Table $\mathbf{1 . 8 \times 5 . 4 ~ \mathbf { m }}$ |  |
| :---: | :---: |
| DIN EN 12812 |  |
| Slab thickness <br> d [mm] | Prop load <br> $\mathrm{A}[\mathrm{kN}]$ |
| 100 | 11.15 |
| 150 | 14.19 |
| 200 | 17.23 |
| 250 | 20.26 |
| 300 | 23.30 |
| 350 | 26.64 |
| 400 | 29.98 |
| 450 | 33.32 |
| 500 | 36.67 |



## WARNING

## Risk of collapse and/or serious injury!

Check additional prop loads at the infill areas, see section regarding infills starting on page 86.

## Applications

### 5.1.3 Connecting TOPMAX Floor Tables

Tables are connected to each other at the external profiles using Centering Tension Bolts (code:479264) and Centering Nut 100 (code:469566) (see typical section below).


## Typical connection positions

Typically the TOPMAX Floor Tables are connected to each other using the positions shown below, however this may vary depending on the job specific requirements.


### 5.2 Props and bearings

### 5.2.1 EUROPLUSnew props

## Extending / retracting the EUROPLUSnew Props

| A. WARNING | Risk of collapse and/or serious injury! <br> Do not release the collar when the props are under compression. |
| :--- | :--- |

Step 1 Push the quick release bolt fully to release the inner tube.


Step 2 Slide the inner tube to for rough prop length adjustment.


Step 3 Insert the quick release bolt back into the inner tube at the appropriate hole position.


Step 4 Rotate the collarfor for exact prop length adjustment


## Applications

## NOTICE

## Risk of damage to components!

Ensure that the side of the quick release bolt is not in contact with the threaded part on the prop (see below). This will cause damage to the thread once the prop is under load.


## EUROPLUSnew prop orientation

Please note the correct orientation of the EUROPLUSnew props.

Inner tube down


Inner tube up


Also note the correct orientation of the EUROPLUSnew props in relation to the TOPMAX Folding Head (code:602596).


The EUROPLUSnew props must be positioned so that the quick release bolts face away from the centre of the table as shown below, to prevent the quick release bolt from disengaging when swinging the props (lifting the table) and to allow the Multi Mover (code:607150) to be able to be positioned under the table.


Load tables EUROPLUSnew Prop (inner tube down)


| Permitted max. clear room height [m] for slab thickness d [mm] using $1.8 \times 5.4 \mathrm{~m}$ tables |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| d [mm] |  |  | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| N [kN] DIN EN 12812 |  |  | 14.19 | 17.23 | 20.26 | 23.30 | 26.64 | 29.98 | 33.32 | 36.67 |
| Prop type | 1 [min] | Head bearing con |  |  |  |  |  |  |  |  |
| 20-250 | 1.63 | Head hinged | 2.62 | 2.62 | 2.62 | 2.62 | 2.42 | - | - | - |
|  |  | Head fixed | 2.62 | 2.62 | 2.62 | 2.62 | 2.42 | - | - | - |
| 20-300 | 1.88 | Head hinged | 3.12 | 3.12 | 3.12 | 3.12 | 3.02 | 2.82 | 2.72 | 2.52 |
|  |  | Head fixed | 3.12 | 3.12 | 3.12 | 3.12 | 3.12 | 3.12 | 3.12 | 3.02 |
| 20-350 | 2.14 | Head hinged | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | - | - | - |
|  |  | Head fixed | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | - | - | - |
| 20-400 | 2.40 | Head hinged | 4.12 | 4.12 | 4.12 | 4.12 | 4.02 | 3.82 | - | - |
|  |  | Head fixed | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | - | - |
| 20-550 | 3.19 | Head hinged | 5.62 | 5.62 | 5.62 | 5.62 | 5.33 | 5.12 | 4.92 | 4.82 |
|  |  | Head fixed | 5.62 | 5.62 | 5.62 | 5.62 | 5.62 | 5.62 | 5.52 | 5.42 |
| 30-150 | 1.10 | Head hinged | 1.62 | 1.62 | 1.62 | 1.62 | 1.62 | 1.62 | 1.62 | 1.62 |
|  |  | Head fixed | 1.62 | 1.62 | 1.62 | 1.62 | 1.62 | 1.62 | 1.62 | 1.62 |
| 30-250 | 1.63 | Head hinged | 2.62 | 2.62 | 2.62 | 2.62 | 2.62 | 2.62 | 2.62 | - |
|  |  | Head fixed | 2.62 | 2.62 | 2.62 | 2.62 | 2.62 | 2.62 | 2.62 | - |
| 30-300 | 1.88 | Head hinged | 3.12 | 3.12 | 3.12 | 3.12 | 3.12 | 3.12 | 3.12 | 3.12 |
|  |  | Head fixed | 3.12 | 3.12 | 3.12 | 3.12 | 3.12 | 3.12 | 3.12 | 3.12 |
| 30-350 | 2.14 | Head not fixed | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.52 |
|  |  | Head fixed | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 |
| 30-400 | 2.40 | Head hinged | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 |
|  |  | Head fixed | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 |

## Load tables EUROPLUSnew Prop - Line D

| EUROPLUSnew with or without fixed bearing condition at head |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Permitted prop loads [kN] of Line D-in accordance with the type approval "Inner tube down" |  |  |  |  |  |  |  |  |  |  |
| L [m] | 20-250 |  | 20-300 |  | 20-350 |  | 20-400 |  | 20-550 |  |
|  | Head hinged | $\begin{aligned} & \text { Head } \\ & \text { fixed } \end{aligned}$ | Head hinged | $\begin{aligned} & \text { Head } \\ & \text { fixed } \end{aligned}$ | Head hinged | Head fixed | Head hinged | Head fixed | Head hinged | $\begin{aligned} & \text { Head } \\ & \text { fixed } \end{aligned}$ |
| 1.10 |  |  |  |  |  |  |  |  |  |  |
| 1.20 |  |  |  |  |  |  |  |  |  |  |
| 1.30 |  |  |  |  |  |  |  |  |  |  |
| 1.40 |  |  |  |  |  |  |  |  |  |  |
| 1.50 | 27.76 | 27.76 |  |  |  |  |  |  |  |  |
| 1.60 | 27.76 | 27.76 |  |  |  |  |  |  |  |  |
| 1.70 | 27.76 | 27.76 |  |  |  |  |  |  |  |  |
| 1.80 | 27.76 | 27.76 | 38.48 | 38.48 |  |  |  |  |  |  |
| 1.90 | 27.76 | 27.76 | 38.48 | 38.48 |  |  |  |  |  |  |
| 2.00 | 27.76 | 27.76 | 38.48 | 38.48 | 27.76 | 27.76 |  |  |  |  |
| 2.10 | 27.76 | 27.76 | 38.48 | 38.48 | 27.76 | 27.76 |  |  |  |  |
| 2.20 | 27.76 | 27.76 | 38.48 | 38.48 | 27.76 | 27.76 |  |  |  |  |
| 2.30 | 27.76 | 27.76 | 38.48 | 38.48 | 27.76 | 27.76 | 30.97 | 30.97 |  |  |
| 2.40 | 26.52 | 27.76 | 38.48 | 38.48 | 27.76 | 27.76 | 30.97 | 30.97 |  |  |
| 2.50 | 24.73 | 27.76 | 38.48 | 38.48 | 27.76 | 27.76 | 30.97 | 30.97 |  |  |
| 2.60 |  |  | 35.55 | 38.48 | 27.76 | 27.76 | 30.97 | 30.97 |  |  |
| 2.70 |  |  | 32.42 | 38.48 | 27.76 | 27.76 | 30.97 | 30.97 |  |  |
| 2.80 |  |  | 29.69 | 38.48 | 27.76 | 27.76 | 30.97 | 30.97 |  |  |
| 2.90 |  |  | 26.95 | 37.15 | 27.76 | 27.76 | 30.97 | 30.97 |  |  |
| 3.00 |  |  | 24.21 | 35.50 | 27.76 | 27.76 | 30.97 | 30.97 |  |  |
| 3.10 |  |  |  |  | 27.76 | 27.76 | 30.97 | 30.97 | 38.48 | 38.48 |
| 3.20 |  |  |  |  | 27.76 | 27.76 | 30.97 | 30.97 | 38.48 | 38.48 |
| 3.30 |  |  |  |  | 27.76 | 27.76 | 30.97 | 30.97 | 38.48 | 38.48 |
| 3.40 |  |  |  |  | 27.76 | 27.76 | 30.97 | 30.97 | 38.48 | 38.48 |
| 3.50 |  |  |  |  | 27.76 | 27.76 | 30.97 | 30.97 | 38.48 | 38.48 |
| 3.60 |  |  |  |  |  |  | 30.97 | 30.97 | 38.48 | 38.48 |
| 3.70 |  |  |  |  |  |  | 30.97 | 30.97 | 38.48 | 38.48 |
| 3.80 |  |  |  |  |  |  | 28.95 | 30.97 | 38.48 | 38.48 |
| 3.90 |  |  |  |  |  |  | 26.84 | 30.97 | 38.48 | 38.48 |
| 4.00 |  |  |  |  |  |  | 24.73 | 30.97 | 38.48 | 38.48 |
| 4.10 |  |  |  |  |  |  |  |  | 38.48 | 38.48 |
| 4.20 |  |  |  |  |  |  |  |  | 38.48 | 38.48 |
| 4.30 |  |  |  |  |  |  |  |  | 38.48 | 38.48 |
| 4.40 |  |  |  |  |  |  |  |  | 38.48 | 38.48 |
| 4.50 |  |  |  |  |  |  |  |  | 38.48 | 38.48 |
| 4.60 |  |  |  |  |  |  |  |  | 38.48 | 38.48 |
| 4.70 |  |  |  |  |  |  |  |  | 36.71 | 38.48 |
| 4.80 |  |  |  |  |  |  |  |  | 34.12 | 38.48 |
| 4.90 |  |  |  |  |  |  |  |  | 31.71 | 38.38 |
| 5.00 |  |  |  |  |  |  |  |  | 30.29 | 38.38 |
| 5.10 |  |  |  |  |  |  |  |  | 28.87 | 38.38 |
| 5.20 |  |  |  |  |  |  |  |  | 27.45 | 38.38 |
| 5.30 |  |  |  |  |  |  |  |  | 26.03 | 37.42 |
| 5.40 |  |  |  |  |  |  |  |  | 24.60 | 34.68 |
| 5.50 |  |  |  |  |  |  |  |  | 23.18 | 31.94 |

## Load tables EUROPLUSnew Prop - Line E

| EUROPLUSnew with or without fixed bearing condition at head |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Permitted prop loads [KN] of Line E-in accordance with the type approval "Inner tube down" |  |  |  |  |  |  |  |  |  |  |
| L [m] | 30-150 |  | 30-250 |  | 30-300 |  | 30-350 |  | 30-400 |  |
|  | Head hinged | Head fixed | Head hinged | Head fixed | Head hinged | Head fixed | Head hinged | Head fixed | Head hinged | Head fixed |
| 1.10 | 38.48 | 38.48 |  |  |  |  |  |  |  |  |
| 1.20 | 38.48 | 38.48 |  |  |  |  |  |  |  |  |
| 1.30 | 38.48 | 38.48 |  |  |  |  |  |  |  |  |
| 1.40 | 38.48 | 38.48 |  |  |  |  |  |  |  |  |
| 1.50 | 38.48 | 38.48 | 33.33 | 33.33 |  |  |  |  |  |  |
| 1.60 |  |  | 33.33 | 33.33 |  |  |  |  |  |  |
| 1.70 |  |  | 33.33 | 33.33 |  |  |  |  |  |  |
| 1.80 |  |  | 33.33 | 33.33 | 37.21 | 37.21 |  |  |  |  |
| 1.90 |  |  | 33.33 | 33.33 | 37.21 | 37.21 |  |  |  |  |
| 2.00 |  |  | 33.33 | 33.33 | 37.21 | 37.21 | 49.95 | 49.95 |  |  |
| 2.10 |  |  | 33.33 | 33.33 | 37.21 | 37.21 | 49.95 | 49.95 |  |  |
| 2.20 |  |  | 33.33 | 33.33 | 37.21 | 37.21 | 49.95 | 49.95 |  |  |
| 2.30 |  |  | 33.33 | 33.33 | 37.21 | 37.21 | 49.95 | 49.95 | 38.48 | 38.48 |
| 2.40 |  |  | 33.33 | 33.33 | 37.21 | 37.21 | 49.95 | 49.95 | 38.48 | 38.48 |
| 2.50 |  |  | 33.33 | 33.33 | 37.21 | 37.21 | 49.95 | 49.95 | 38.48 | 38.48 |
| 2.60 |  |  |  |  | 37.21 | 37.21 | 49.95 | 49.95 | 38.48 | 38.48 |
| 2.70 |  |  |  |  | 37.21 | 37.21 | 49.95 | 49.95 | 38.48 | 38.48 |
| 2.80 |  |  |  |  | 37.21 | 37.21 | 48.56 | 49.95 | 38.48 | 38.48 |
| 2.90 |  |  |  |  | 37.21 | 37.21 | 47.07 | 49.95 | 38.48 | 38.48 |
| 3.00 |  |  |  |  | 36.58 | 37.21 | 45.58 | 49.95 | 38.48 | 38.48 |
| 3.10 |  |  |  |  |  |  | 44.09 | 49.95 | 38.48 | 38.48 |
| 3.20 |  |  |  |  |  |  | 41.73 | 49.95 | 38.48 | 38.48 |
| 3.30 |  |  |  |  |  |  | 39.15 | 49.95 | 38.48 | 38.48 |
| 3.40 |  |  |  |  |  |  | 36.58 | 49.95 | 38.48 | 38.48 |
| 3.50 |  |  |  |  |  |  | 34.00 | 49.95 | 38.48 | 38.48 |
| 3.60 |  |  |  |  |  |  |  |  | 38.48 | 38.48 |
| 3.70 |  |  |  |  |  |  |  |  | 38.48 | 38.48 |
| 3.80 |  |  |  |  |  |  |  |  | 38.48 | 38.48 |
| 3.90 |  |  |  |  |  |  |  |  | 38.48 | 38.48 |
| 4.00 |  |  |  |  |  |  |  |  | 38.48 | 38.48 |

The load tables shown are applicable to EUROPLUSnew props when used as the main support for the TOPMAX Floor Tables and attached to the connection points on the main profiles of the table. Load capacity of EUROPLUSnew props for infills or extension tables can be taken from TOPFLEX User Guide.".

The term "head fixed" (top fixed bearing) describes a calculation method acc. to DIN EN 1065 for steel props. In regions where this method is not approved, consider the values for head hinged bearing.

### 5.2.2 Tripods

For interim storage of the TOPMAX Floor Tables, slide in the inner tubes of the props to the permitted length and equip all props with Uni Tripods (code:587377).


## WARNING

## Risk of collapse and/or serious injury!

Do not exceed the permitted prop length.

- With Uni Tripod (code:587377): 4.50 m
- With Uni Tripod (code:587377) + TOPMAX Extension Frame (code:603479): 3.10 m

During strong winds (wind force 6, wind speed: $14 \mathrm{~m} / \mathrm{s}$ ) the TOPMAX Floor Tables must be secured using suitable measures.

### 5.2.3 TOPMAX Floor Table propping

The following section details the application of props when used on single TOPMAX tables. For the use of props on infill areas, see page 86.
It is assumed that at the start of the assembly of any props, the TOPMAX Floor Table is resting on top of trestles or other suitable support. The TOPMAX Floor Tables must be secured against displacement or overturning.

Customer to provide secure access to allow work on the underside and sides of the TOPMAX Floor Tables.

## TOPMAX Folding Head and EUROPLUSnew props

Step 1 Align the hole of the TOPMAX Folding Head (code:602596) with the connection point on the TOPMAX Floor Table profile.


Step 2 Insert the TOPMAX Locking Pin (code:603067) through the profile to secure the head.


When attaching the Locking Pin (code:603067) rotate the handle to avoid clashing with the double wedge of the Folding Head (code:602596) and the internal profiles of the TOPMAX Floor Table.


Step 3 Pull out the double wedge of the folding head.
For clarity, in steps $3-5$, the table is not shown and the folding head is in a horizontal position.


Step 4 Extend the EUROPLUSnew prop to the required length, see page 29.
Step 5 Insert the EUROPLUSnew prop into the folding head, see page 30.


Step 6 Push and strike the double wedge to ensure prop is securely attached.


Step 7 Swivel the head until the claw locks into the connection point on the TOPMAX Floor Table profile.


Step 8 Repeat steps 1-7 for the other folding head positions.

All four TOPMAX Folding Heads (code:602596) must be aligned in the same direction when swivelling props are to be used, for example when tables are to be moved over parapets.

## TOPMAX Head Adapter and EUROPLUSnew props

The TOPMAX Head Adapter (code:603442) allows for a prop to be used on a nonstandard position along the main profile of the TOPMAX Floor Table, however a separate structural analysis is required.

Step 1 Turn each wing nut to extend the claws of the TOPMAX Head Adapter (code:603442).


Step 2 Position the adapter on the required location along the main profile of the TOPMAX Floor Table and tighten the wing nuts again.


It is not possible to operate the wing nut in the area of the panel ribs. Therefore it is necessary to keep a distance between the panel rib and the prop connection of approximately 70 mm .

Step 3 Attach the TOPMAX Folding Head (code:602596) to the TOPMAX Head Adapter (code:603442). See steps $1-7$ on page 36 . See also page 29 for information regarding the props.
Step 4 Attach an EUROPLUSnew prop to the TOPMAX Folding Head and bring it into the resting position. See steps 3-7 of section starting on page 36 .


Step 5 Swivel the TOPMAX Folding Head (code:602596) until the claw locks into the connection point on the TOPMAX Head Adapter (code:603442).


A program to retrofit existing GASS outer legs with the double latch arrangement is underway, during this retrofit period both single and double latch outer legs will be in our stocks. Both options are interchangeable however the separate Safety Latch (code:718907) must be used on all single latch legs when lifting or flying.

For more information regarding the GASS system refer to the GASS User Guide.

Step 1 Extend the GASS Legs to the required length.


Step 2 Attach the TOPMAX GASS Multi Adapter (code:606993) to the GASS Legs using 4no. Ring Bolt Clamp for GASS Leg to GASS Leg (code:718901) per leg.


Step 3 Align the hole of the TOPMAX Folding Head (code:602596) with the connection point on the TOPMAX Floor Table profile.


Step 4 Insert the TOPMAX Locking Pin (code:603067) through the profile to secure the head.


Step 5 Swivel the head until the claw locks into the connection point on the TOPMAX Floor Table profile.


Step 6 Pull out the double wedge of the folding head. For clarity, in steps 6-8, the table is not show.


Step 7 Insert the TOPMAX GASS Multi Adapter (code:606993) with the GASS Leg attached into the folding head.


Step 8 Push and strike the double wedge to ensure prop is securely attached.


Step 9 Repeat steps 1-8 for the other folding head positions.

## Risk of damage to components!

If single GASS Legs are used with the TOPMAX Floor Tables, the legs must not be swung when moving the table and must remain in the vertical position at all times.


## TOPMAX GASS Tower Adapter and GASS Legs



A program to retrofit existing GASS outer legs with the double latch arrangement is underway, during this retrofit period both single and double latch outer legs will be in our stocks. Both options are interchangeable however the separate Safety Latch (code:718907) must be used on all single latch legs when lifting or flying.
For more information regarding the GASS system, please refer to the GASS User Guide.

Step 1 Build the GASS frame to the required height.


Step 2 Attach the TOPMAX GASS Tower Adapter (code:606994) to each GASS Legs using 4no. Ring Bolt Clamp for GASS Leg to GASS Leg (code:718901) per leg.


Note the different orientation of the TOPMAX GASS Tower Adapters (code:606994) at each end.

Step 3 Attach 4no. TOPMAX Crane Suspension (code:603050) to a TOPMAX Floor Table. See page 144 for information regarding the TOPMAX Crane Suspension (code:603050).


Step 4 Attach slings to the TOPMAX Crane Suspension (code:603050) and lift the TOPMAX Floor Table.


Step 5 Position the TOPMAX Floor Table on top of the GASS frame and lower until the table is supported by the TOPMAX GASS Tower Adapters (code:606994). Align the holes in the TOPMAX main profile with the slot holes of the TOPMAX GASS Tower Adapters.


Risk of damage, collapse and/or serious injury!
Ensure that the weight of the TOPMAX Floor Table is evenly distributed on all props.

Step 6 Secure the table by inserting a TOPMAX Locking Pin (code:603067) through the slot hole of each of the 4no. TOPMAX GASS Tower Adapters (code:606994).


## Applications

Step 7 After checking that the table is stable, remove the crane slings and the TOPMAX Crane Suspension (code:603050).


### 5.3 Extension Frames

The TOPMAX Extension Frame (code:603479) is used at job sites with high slab heights up to 7.62 m when the extension length of the EUROPLUSnew props is not sufficient.


| A. WARNING | Risk of damage, collapse and/or serious injury! |
| :--- | :--- |
| Two operatives are required to assemble the TOPMAX Extension Frame (code:603479) |  |
| to prevent the vertical frames from unintended dropping. |  |

Step 1 To unfold the TOPMAX Extension Frame (code:603479) pull out the spring pin 4 and the waler bolt D20.


Step 2 Unfold the frame.


Step 3 Insert the waler bolt D20 and secure with the spring pin 4.


Step 4 Brace using 2no. Diagonals 203 (code:110167) which have to be ordered separately. Secure the diagonal by hooking into the lower cross beam of the extension frame and secured to the anti-luce fittings at the top of the opposite side.


Step 5 Extend the EUROPLUSnew Props to the required height, see page 29.
Step 6 Slide out the double wedge at the bottom corner of the frame.


Step 7 Attach the props onto the prop retainer of the frame.


Step 8 Secure the prop by sliding the double wedge in.


Step 9 Repeat steps 5-8 for the remaining corners.
Step 10 Attach 4no. TOPMAX Crane Suspension (code:603050) to a TOPMAX Floor Table. See page 144 for information regarding the TOPMAX Crane Suspension (code:603050).


Step 11 Attach slings to the TOPMAX Crane Suspension (code:603050) and lift the TOPMAX Floor Table.


Step 12 Position the TOPMAX Floor Table on top of the frame and strut assembly and lower until the table is supported by the TOPMAX Extension Frame (code:603479). Align the holes in the TOPMAX main profile with the slot holes of the frame.

## Risk of damage, collapse and/or serious injury!

Ensure that the weight of the TOPMAX Floor Table is evenly distributed.


Step 13 Secure the table by inserting the TOPMAX Locking Pin (code:603067) .


## Applications

Step 14 Repeat step 13 for the remaining corners.
Step 15 After checking that the table is stable, remove the crane slings and the TOPMAX Crane Suspension (code:603050).


### 5.4 Extension panels

The TOPMAX Support Girder (code:603390) is a support beam that allows for RASTO/ TAKKO panels to be attached to TOPMAX Floor Tables as an extension or as propped infill panels.

For the use of RASTO or TAKKO as infill panels without prop support, see pages 94 and 99 .

The TOPMAX Support Girder is attached to the TOPMAX during the assembly of the table on the ground and the whole assembly can be lifted by crane into position. The girder is attached to the TOPMAX Floor Table and the cantilevered arm has to be adjusted according to the width of the RASTO and TAKKO panels.

| $\frac{\text { The TOPMAX Support Girder (code:603390) must be placed as per the design scheme }}{}$ supplied. |
| :--- | :--- |

## WARNING $\quad$ Risk of damage, collapse and/or serious injury!

TOPMAX Floor Tables with extension panels can only be moved using the TOPMAX Lifting Fork (code:603074) or the Multi Mover (code:607150).
When moving or lifting tables with extension panels, an additional calculation and approval is required.

## Unsupported assembly

Step 1 Remove the safety clips and pins and keep them for later use.


Step 2 Position the TOPMAX Support Girder (code:603390) as per the design scheme supplied. Align the hole of the girder with the hole position of the table.

Step 3 Secure the girder using 2no. Waler Bolt D20 (code:420000) and 2no. Spring Pin 4 (code:173776). that were removed earlier on step 1.


The hole position to be used on the TOPMAX Floor Table will vary depending on the job requirements. Refer to the scheme design supplied.

Step 4
Repeat steps 1-5 for the other girder positions (see notes regarding placement of the girder shown above).


## WARNING

## Risk of damage, collapse and/or serious injury!

If no support for the extension panels is used, additional measures to prevent overturning are required at this moment before installing the extension (cantilevered) panels.

## Supported assembly

If there is a requirement to support the cantilever of the girder, mid way or at the end, continue the assembly as below. If support is not required, skip steps 7-12.

Step 5 Position the TOPMAX Lockable Head (code:603404) so that the holes of the head align with the correct hole position of the cantilevered arm of the girder.

The position of the TOPMAX Lockable Head (code:603404) will vary depending on the job requirements. Refer to the scheme design supplied.


Step 6 Secure the head using a Waler Bolt D20 (code:420000) and a Spring Pin 4 (code:173776).

The Waler Bolt D20 (code:420000) and the Spring Pin 4 (code:173776) are not included with the TOPMAX Lockable Head (code:603404) and will have to be ordered separately.


Step 7 Insert the EUROPLUSnew Prop in the TOPMAX Lockable Head (code:603404).
The type of EUROPLUSnew Prop will vary depending on the job requirements. Refer to the scheme design supplied.


Step 8 Secure the head using a TOPEC Bolt. For the appropriate bolt to be used see page 106.


Step 9 Extend the EUROPLUSnew prop to the required height, see page 29.


Step 10 Repeat steps 7-11 for the other support positions.


Step 11 Position the RASTO/TAKKO Panel on top of the girders and align with the TOPMAX Floor Table.


Step 12 Insert the threaded pin of a Centering Tension Bolt (code:479264) into the required hole position on the external profile of the table.


The position and quantity of Centering Tension Bolt (code:479264) and of the Centering Nut (code:469566) used will vary depending on the job requirements. Refer to the scheme design supplied.

Step 13 Secure using a Centering Nut 100 (code:469566) attached from the inside of the external profile of the RASTO/TAKKO panel.


Step 14 Repeat steps 14-15 for the other positions of the nut.


## Applications

Step 15 Repeat steps 13-16 for the other position of the RASTO/TAKKO panel.


## Typical configurations

The following typical configurations are applicable only when using a TOPMAX Floor Table $2.4 \times 5.4 \mathrm{~m}$ (code:602586). If a TOPMAX Floor Table $1.8 \times 5.4 \mathrm{~m}$ (code:602585) is to be used, a separate analysis is required.

## Case 1 - Cantilevered 0.45 m panels, no support.



| Slab thickness [mm] | Concrete load <br> [kN/m²] | Support load TOPMAX prop [kN] | Deflection <br> [DIN 18202] |
| :---: | :---: | :---: | :---: |
| 100 | 4.40 | 23.10 | Line 7 |
| 150 | 5.60 | 29.70 | Line 7 |
| 200 | 6.90 | 36.30 | Line 6 |
| 250 | 8.10 | 42.90 | Line 5 |
| 300 | 9.40 | 49.60 | Line 5 |
| 350 | 10.80 | 57.30 | Line 5 |


| WARNING | Risk of damage, collapse and/or serious injury! <br> The configuration shown in case 1 is to be used for: |
| :--- | :--- |
| - access only or |  |
|  | - as an infill panel when connected to the next table using Centering Tension Bolts |
| (code:479264) and Centering Nut 100 (code:469566), see page 94. |  |

Case 2 - Cantilevered 0.90 m panels, end support.


| Slab thickness | Concrete load | Support load |  | Deflection <br> [DIN 18202] |
| :---: | :---: | :---: | :---: | :---: |
|  |  | TOPMAX prop | RASTO/TAKKO prop |  |
| [mm] | [ $\mathrm{kN} / \mathrm{m}^{2}$ ] | [ kN ] | [kN] |  |
| 100 | 4.40 | 19.50 | 4.20 | Line 7 |
| 150 | 5.60 | 25.00 | 5.50 | Line 7 |
| 200 | 6.90 | 30.50 | 6.70 | Line 7 |
| 250 | 8.10 | 36.10 | 7.90 | Line 7 |
| 300 | 9.40 | 41.70 | 9.20 | Line 6 |
| 350 | 10.80 | 48.10 | 10.60 | Line 6 |

## Case 3 - Cantilevered 0.90 m panels, middle support.



| Slab thickness | Concrete load | Support load |  | Deflection |
| :--- | :---: | :---: | :---: | :---: |
|  |  | TOPMAX prop | RASTO/TAKKO <br> prop |  |
| $[\mathbf{m m}]$ | $\left[\mathbf{k N} / \mathbf{m}^{2}\right]$ | $[\mathbf{k N}]$ | $[\mathbf{k N}]$ | [DIN 18202] |
| 100 | 4.40 | 14.80 | 5.90 | Line 7 |
| 150 | 5.60 | 19.10 | 7.60 | Line 6 |
| 200 | 6.90 | 23.30 | 9.20 | Line 5 |
| 250 | 8.10 | 27.60 | 10.90 | Line 5 |

Case 4 - Cantilevered 1.35 m panels, end support.


| Slab thickness | Concrete load | Support load |  | Deflection |
| :--- | :---: | :---: | :---: | :---: |
|  |  | TOPMAX prop | $\begin{array}{c}\text { RASTO/TAKKO } \\ \text { prop }\end{array}$ |  |
|  |  |  | $[\mathbf{k N}]$ | $[\mathbf{k N}]$ |$]$|  |
| :---: |
|  |

Case 5 - Cantilevered 1.35 m panels, middle support.


| Slab thickness | Concrete load | Support load |  | Deflection <br> [DIN 18202] |
| :---: | :---: | :---: | :---: | :---: |
|  |  | TOPMAX prop | RASTO/TAKKO prop |  |
| [mm] | [ $\mathrm{KN} / \mathrm{m}^{2}$ ] | [kN] | [kN] |  |
| 100 | 4.40 | 19.00 | 8.30 | Line 7 |
| 150 | 5.60 | 24.40 | 10.70 | Line 7 |
| 200 | 6.90 | 30.00 | 13.10 | Line 7 |

## Applications

### 5.5 Working platforms

### 5.5.1 Platforms

TOPMAX Working Platforms can be safely installed whilst the pre-assembled TOPMAX floor tables are on the ground. The whole assembly can then be lifted in one crane lift to the required position on the slab.

The platform is supplied in the folded position.
Step 1 Attach the crane slings to the lifting points on the platform.


Step 2 Lift the platform into position.


Step 3 Insert the threaded pins of the platform into the required hole positions on the external profile of the table.


Step 4 Secure using 4no. Centering Nuts 100 (code:469566) on the inside of the external profile of the table.


Step 5 Once the platform is secure, release the crane slings.
Step 6 Unfold the guardrail posts of the platform until the posts are in the vertical position.

| A. WARNING | Risk of fall! <br> Always work from a safe position. |
| :--- | :--- |



### 5.6 Edge protection

As specified in BS EN 13374 Temporary Edge Protection Systems, the minimum height between the working area and the top of the edge protection should be 1.00 m . This may vary if the top of the slab is to be considered as the working area instead of the top of the formwork panel, which will depend on how close the slab end is to the edge of the panel.

## Height of edge protection

In accordance with BS EN 13374 Temporary Edge Protection Systems, the height of the edge protection should be determined as follows:


The value of the height $(\mathrm{H})$ determined by the formula above should be the highest of the two values.

As a reference, the below table shows the required edge protection height $(H)$ when both the slab height $(\mathrm{H} 1)$ and access width (b) are considered.

|  |  | Access width, b [m] |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 | 0.70 | 0.80 | 0.90 | 1.00 | 1.10 |
|  | 0.10 | 1.08 | 1.06 | 1.02 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
|  | 0.15 | 1.13 | 1.11 | 1.08 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
|  | 0.20 | 1.18 | 1.16 | 1.13 | 1.09 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
|  | 0.25 | 1.23 | 1.21 | 1.18 | 1.15 | 1.10 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 |
|  | 0.30 | 1.28 | 1.26 | 1.24 | 1.20 | 1.15 | 1.10 | 1.02 | 1.00 | 1.00 | 1.00 |
|  | 0.40 | 1.39 | 1.37 | 1.34 | 1.31 | 1.26 | 1.21 | 1.15 | 1.07 | 1.00 | 1.00 |
|  | 0.50 | 1.49 | 1.47 | 1.45 | 1.41 | 1.37 | 1.33 | 1.27 | 1.20 | 1.12 | 1.02 |

Values in white cell: BS EN 13374, minimum protection height 1.00 m .
Values in shaded cell: PROTECTO posts with PROTECTO Panel G2 or with timber railing. Provide protection to BS EN 13374.

Values in shaded cells and in bold:
PROTECTO posts with PROTECTO Panels G2 or with timber railings as standard do not provide enough protection height. The access width may need to be increased, or the PROTECTO posts used with appropriate extension socket (requires reduced post spacing) or secondary edge protection on the slab to be installed.
edge protection is required regardless of the distance between the slab edge and the formwork edge. The height of this secondary edge protection must be 1.00 m measured from the top of the slab.


Although these are some of the most common cases used on site, other solutions which comply with the current standard may be used depending on the individual job requirements.

The minimum height of the edge protection may vary from region to region. In Germany for example, the minimum height of the edge protection will change from 1.00 m to 1.10 m if the drop height is more than 12.00 m

Refer to your local regulation for more information.

## WARNING <br> Risk of fall from height!

Suitable protective measures must be in place during the installation of the edge protection systems. It is assumed that the operatives are protected by these measures during assembly and disassembly of the edge protection systems.

The performance of an edge protection system is directly related to the structure to which it is attached. The structure must withstand the extra imposed loads.

## WARNING

## Risk of collapse and fall from height!

All fixings of the edge protection system to the existing structure must suit the specific application and be selected by a competent person.

Customer to ensure that the concrete can take the extra imposed loads.

### 5.6.1 PROTECTO Panels and post

The PROTECTO Panel G2 can be used for edge protection on both wet deck and dry deck applications. The PROTECTO Panel G2 is to be used with the PROTECTO Post 130 Adjustable (code:692750) and depending on the application the required ancillary components will vary.


1 Steel frame
2 Steel toeboard
3 Steel wire $\varnothing 5.5$ mm (horizontal) $\varnothing 3.75 \mathrm{~mm}$ (vertical)
4 Centre sticker (company branding)
5 Small sticker (item information)
The minimum required panel overlap is 200 mm as shown below.


## PROTECTO Post 130 Adjustable

The PROTECTO Post 130 Adjustable (code:692750) provides support for the PROTECTO Panels G2. The post has a cross-section of $35 \times 35 \mathrm{~mm}$ which allows the PROTECTO Post 130 Adjustable (code:692750) to be used with the ancillaries of the PROTECTO Railing Post (code:601225).


1 SHS $35 \times 35 \times 2 \mathrm{~mm}$
2 Plastic cap
3 Tapping screw as $\varnothing 12 \mathrm{~mm}$ stopper
4 Sliding latch
5 Sliding T latch
6 Safety device (not visible)
7 Ø8 mm hole for plastic zip tie
8 Captive hexagonal nut and wing nut

It is recommend that the sliding latch is secured against accidental opening by using a plastic zip tie through the $\varnothing 8 \mathrm{~mm}$ hole.


For additional security, a cable tie can be added (optional).

## Applications

## Safety device

The safety device is used to prevent accidental displacement of the PROTECTO posts. Both the PROTECTO Post 130 Adjustable (code:692750) and the PROTECTO Railing Post (code:601225) have a safety device.
To correctly install the PROTECTO posts, insert the post into the retainer and press the actuator pin of the safety lock. The locking pin retracts inside the post and the post can be inserted into the retainer. When the locking pin is inside the retainer piece, release the actuator pin. Insert the post into the retainer until the spring mechanism can be heard and seen as fully locked. Test the proper seating of the post by pulling and inspect visually the correct engagement of the locking pin.


## WARNING

Risk of falling from height!
Do not use a post with a damaged or missing safety device.

Ensure that the locking pin is properly engaged to the retainer piece.

### 5.6.2 Assembly of edge protection using PROTECTO G2

The TOPMAX Post Fastener (code:602123) in conjunction with a Centering Nut 100 (code:469566) allows for edge protection to be attached to a TOPMAX Table Form.


## Required components

The following components are required for this application:

- PROTECTO Post 130 Adjustable (code:692750)
- PROTECTO Panel G2
- Centering Nut 100 (code:469566)
- TOPMAX Post Fastener (code:602123)

When using the PROTECTO Panels G2 as edge protection, the PROTECTO Post 130 Adjustable (code:692750) must not be placed more than 2.40 m apart.

## Typical assembly

Step 1 Insert the threaded pin of the TOPMAX Post Fastener (A) into the hole position on the external profile of the TOPMAX Floor Table (B).


For more information regarding set-out, centre and edge distances, refer to the design scheme(s) supplied

Step 2 Secure the TOPMAX Post Fastener (A) using a Centering Nut 100 (C) on the inside of the external profile of the TOPMAX Floor Table.


Step 3 Repeat steps 1-2 for the other positions of the post socket.


Step 4 Insert the PROTECTO Post 130 Adjustable (D) into the TOPMAX Post Fastener (A).


The post is secure when the locking pin is located in the pin hole of the TOPMAX Post Fastener (coded:602123). A "click" sound is produced when the pin springs out of the hole


Step 5 Repeat step 4 for the other positions of the post.
Step 6 Position the PROTECTO Panel G2 (E) at an angle, with the bottom part closest to the PROTECTO Post 130 Adjustable (D). Locate the bottom wire of the PROTECTO Panel G2 (E) on the top face of the PROTECTO Post 130 Adjustable T Latch (F). The T Latch may require its position to be adjusted using the captive thumb screw.


Step 7 Rotate the top of the PROTECTO Panel G2 (E) towards the PROTECTO Post 130 Adjustable (D) so that the latches capture the PROTECTO Panel G2 mesh. The PROTECTO Post latch (G) may require its position to be adjusted using the captive thumb screw.


It is recommended to install plastic zip ties on the PROTECTO Post 130 Adjustable latches to prevent accidental opening and to prevent tampering.

Ensure the PROTECTO Panel G2 (E) bottom wire is horizontally restrained by the PROTECTO Post T latch (F), and the upper wire is captivated by the PROTECTO Post latch (G) (alternatively the T latch can be moved downwards to locate over the top of the toe board with the thumb screw tightened to lock in position).

Ensure the PROTECTO Panel G2 (E) is sitting flush on the working platform or slab. Adjust latches as required.

The assembly is now concluded. For disassembling the edge protection, follow the steps shown here in the reverse order.

### 5.6.3 Assembly of edge protection using EXTRAGUARD

Step 1 Insert the threaded pin of the TOPMAX EXTRAGUARD Socket Base (code:617605) to the required hole position on the external profile of the TOPMAX Floor Table.


Step 2 Secure the socket base using a Centering Nut 100 (code:469566) on the inside of the external profile of the TOPMAX Floor Table.


Step 3 Insert the EXTRAGUARD Guardrail Post into the socket base. The post is secure when the locking pin is located at the end of the "J" slot as shown in the detail.


When flying TOPMAX tables with EXTRAGUARD as edge protection a Pivot Pin $16 \times 100 \mathrm{~mm}$ (code:590850) and a Safety Pin (code:590851) is required to secure the EXTRAGUARD Guardrail Post to the TOPMAX EXTRAGUARD Socket Base (code:617605) as shown below. This is required for all post positions on the table.


Step 4 Repeat steps 1-3 for the other post positions.


When using EXTRAGUARD Panels as edge protection, the EXTRAGUARD Guardrail Posts must not be placed more than 2.40 m apart.

Step 5 Raise the toe board bracket of the post and position the EXTRAGUARD Panels on the EXTRAGUARD Guardrail Post.


Step 6 Lower the tower board bracket and ensure that the post protrudes through the mesh at the top of the panel.


Step 7 Repeat steps 5-6 for the other panel positions.


### 5.7 Stabilizing aids

### 5.7.1 Struts

Struts are typically used to stabilise and secure the TOPMAX tables when these are placed near the leading edges of existing structures.
Always make sure that the deck level of TOPMAX tables is laterally stable in all directions. This can be achieved by butting against the existing structure or by bracing using Wall Struts. The struts can be attached to both sides of the TOPMAX Floor Table.

Wall Struts are secured to the profiles of the TOPMAX Floor Tables using 1no. Centering Tension Bolt (code:479264) and 1no. Centering Nut (code:469566) per strut.

The strut Safe Working Load depends on the load carrying capacity of the frame profile:
Max. H permitted: 5.00 kN
Max. strut load $\left(\alpha=45^{\circ}\right): 7.10 \mathrm{kN}$
Max. strut load $\left(a=60^{\circ}\right): 10.10 \mathrm{kN}$

Step 1 Insert a Centering Tension Bolt (code:479264) into the required position on the inner profile of the TOPMAX Floor Table.


Step 2 Insert the Wall Strut through the threaded rod of the bolt.


Step 3 Secure the strut by inserting a Centering Nut 100 (code:469566) through the threaded rod of the bolt and tighten.


Please note the correct position of strut when attached to the "C" profiles of the TOPMAX Floor Table.


Regardless of the direction of the strut, always attach the wall struts to the closed side of the C profile and fixed at maximum of 190 mm from the main profiles (edge profile or main inner profile) as shown below.


## Applications

It is possible to use the struts to achieve restraint in the other direction. In this case the strut can be attached to the stiffener profile (see note above) or anywhere on the long side profile.

Some possible positions to attach the strut in the other direction are shown below.


## Panel Anchor Bracket

The Panel Anchor Bracket (code:605999) can be used to prevent lateral movement of TOPMAX tables. It is fixed to existing wall at the table head level and replaces Wall Struts for horizontal restraint. Vertical loads must be supported by the table props.

The bracket has two staggered $\varnothing 18$ holes on opposite faces for installing the anchor bolt. Two $\varnothing 36$ holes are aligned with the smaller holes on the opposite face and allow for the spanner extension to be used to fasten the anchor bolt.


Attach this side to TOPMAX floor tables.

The Panel Anchor Bracket (code:605999) is secured using the Anchor Bolt MM + SSK $16 \times 130$ (code:443500). Only one anchor is required per bracket. To fasten the anchor bolt use a 24 mm spanner with a spanner extension.


The Panel Anchor Bracket (code:605999) can be attached to TOPMAX panels as shown below to restrain the panels horizontally.


## ! WARNING

## Risk of damage and / or injury!

This application is for horizontal loads only, vertical loads to be taken by props.
The Customer is responsible for verifying that the concrete strength of the existing structure is in accordance with the specifications shown in page 85.

For more information regarding the Anchor Bolt MM+SSK $16 \times 130$ (code:443500) see page 83. Data sheets are also available upon request.

## Installation:

Step 1 Place the Panel Anchor Bracket (code:605999) at the edge profile of the TOPMAX Floor Table at the location specified by the supplied scheme.
Step 2 Pass a $\varnothing 14$ drill bit through the $\varnothing 18$ hole of the Panel Anchor Bracket (code:605999) and mark where the hole should be drilled. Remove the Panel Anchor Bracket.

Step 3 Use a $\varnothing 14$ drill bit to drill a 134 mm hole in the existing structure.
Step 4 Remove dust from the drilled hole.
Step 5 Place the Panel Anchor Bracket (code:605999) at the edge profile again, insert the Anchor Bolt through the $\varnothing 36$ hole and screw tight using a 24 mm spanner with an extension.

Step 6 Ensure that the Panel Anchor Bracket (code:605999) is securely bolted.

Step 2


Step 3


Step 4


Step 5


Step 6


## Anchor Bolt MM+SSK $16 \times 130$

The Anchor Bolt MM+SSK $16 \times 130$ (code:443500) is used to temporarily secure the components to the existing structure. The bolt can be tighten using a 24 mm spanner.

Bottom plate of the Panel Anchor Bracket (code:605999).


## WARNING

## Risk of damage and / or injury!

The Customer is responsible for verifying that the concrete strength of the existing structure is in accordance with the specifications shown in page 85.

## Spacing

The spacing of the Panel Anchor Bracket (code:605999) will depend on several factors.


| Anchor Bolt MM+SSK 16 $\times$ 130 (code:443500) |  |  |
| :--- | :---: | :---: |
| Technical data |  |  |
| Anchor length | L | 130 mm |
| Fixing thickness | tfix | 15 mm |
| Anchoring depth | Hnom [L - tfix] | 115 mm |
| Depth of drilled hole | H 1 | 125 mm |
| Drill [Ø] | do | 14 mm |
| Drill bit cutting [Ø] | dcut | 14.5 mm |
| Installation torque | Tinst | N/A |
| Spanner size | w.a.f. | 24 mm |
| Minimum spacing | s | $\geq 645 \mathrm{~mm}$ |
| Minimum edge distance | c | $215 / 325 \mathrm{~mm}$ |
| Minimum concrete thickness | d | $\geq 200 \mathrm{~mm}$ |
| Hole in part to be fixed | df | $17-23 \mathrm{~mm}$ |

## Re-using anchor bolts:

When re-using anchor bolts check the bolt beforehand with the Checking Gauge (code:443501).


## WARNING

## Risk of damage and / or injury!

Do not use anchor bolts with visible damage, e.g. corrosion.

## WARNING

## Risk of damage and / or injury!

If a hole is drilled incorrectly, a new hole must be drilled at a distance equal to at least twice the depth of the incorrectly drilled hole.

Anchors can be re-used but the same hole must not be used a second time.

## Safe Working Loads



| Panel Anchor Bracket (code:605999) + Anchor Bolt MM+SSK $16 \times 130$ (code:443500) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| with TOPMAX Floor Table |  |  |  |  |
| Horizontal load - Safe Working Loads |  |  |  |  |
|  | Concrete strength |  |  |  |
|  | $25 \mathrm{~N} / \mathrm{mm}^{2}$ | $20 \mathrm{~N} / \mathrm{mm}^{2}$ | $15 \mathrm{~N} / \mathrm{mm}^{2}$ | $10 \mathrm{~N} / \mathrm{mm}^{2}$ |
| H [kN] | 9.42 | 8.42 | 7.28 | 5.95 |

## Applications

### 5.8 Infills

### 5.8.1 Infills using plywood

Step 1 Attach the hook of the TOPMAX Timber Holder (code:603235) to the hole of the external profile of the TOPMAX Floor Table.


Step 2 Attach as many holders as required. See load tables at the end of assembly sequence..
Step 3 Place a $8 \times 10 \mathrm{~cm}$ timber with an adequate length onto the row of TOPMAX Timber Holders (code:603235). The maximum cantilever length is 300 mm .


Step 4 Secure the timber with nails.


## Step 5 Repeat steps 1-4 for the opposite side.

Step 6 Assemble the mid-span support as determined by the schemes supplied. The full length of the $8 \times 10 \mathrm{~cm}$ timber and some TOPMAX Timber Holders (code:603235) not shown below for clarity.


Step 7 Cut the plywood to size and place on the infill area. Secure to $8 \times 10 \mathrm{~cm}$ timber using nails.


Infill lengthwise without mid-span support




[^0]Infill lengthwise with mid-span support


| Infills lengthwise with mid-span support (table size $2.4 \times 5.4 \mathrm{~m}$ ) Loads to DIN EN 12812 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Slab thickness [mm] | $\begin{aligned} & \mathbf{e}_{\text {min. }} \\ & {[\mathrm{m}]} \end{aligned}$ | $\begin{gathered} \mathbf{e}_{\text {max. }} \\ {[\mathrm{m}]} \end{gathered}$ | Slab thickness (max. distance) [m] | Additional prop load $_{\text {min. }}$. [kN] | Additional prop load $_{\text {max. }}$. [kN] | Plywood 21 mm, Quality F25/10 (DIN 68792) |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  | $\because \square$ |
| 150 | 0.30 | 1.66 | 0.90 | 1.20 | 6.64 |  |
| 200 | 0.30 | 1.56 | 0.90 | 1.48 | 7.68 |  |
| 250 | 0.30 | 1.47 | 0.90 | 1.77 | 8.66 |  |
| 300 | 0.30 | 1.40 | 0.60 | 2.05 | 9.60 | Safe Working Load (vertical): |
| 350 | 0.30 | 1.34 | 0.60 | 2.36 | 10.58 | TOPMAX Timber Holders: |
| 400 | 0.30 | 1.21 | 0.60 | 2.68 | 10.80 | $\mathrm{V}_{\text {perm. }}=1.90 \mathrm{kN}$ |
| 450 | 0.30 | 0.65 | 0.60 | 2.99 | 6.52 |  |
| 500 | 0.30 | 0.58 | 0.60 | 3.30 | 6.30 |  |


| Infills lengthwise with mid-span support (table size $1.8 \times 5.4 \mathrm{~m}$ ) Loads to DIN EN 12812 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Slab thickness [mm] | $\begin{aligned} & \mathbf{e}_{\text {min. }} \\ & {[\mathrm{m}]} \end{aligned}$ | $\begin{aligned} & \mathbf{e}_{\text {max. }} \\ & {[\mathrm{m}]} \end{aligned}$ | Timber holders (max. Abstand) [m] | Additional prop load $_{\text {min. }}$. [kN] | Additional prop load $_{\text {max. }}$. [kN] |  |
|  |  |  |  |  |  |  |
| 150 | 0.30 | 1.66 | 0.90 | 1.00 | 5.53 |  |
| 200 | 0.30 | 1.56 | 0.90 | 1.23 | 6.40 |  |
| 250 | 0.30 | 1.47 | 0.90 | 1.47 | 7.22 |  |
| 300 | 0.30 | 1.40 | 0.60 | 1.71 | 8.00 | Safe Working Load (vertical): |
| 350 | 0.30 | 1.34 | 0.60 | 1.97 | 8.82 | TOPMAX Timber Holder: |
| 400 | 0.30 | 1.29 | 0.60 | 2.23 | 9.60 | $\mathrm{V}_{\text {perm. }}=1.90 \mathrm{kN}$ |
| 450 | 0.30 | 1.25 | 0.60 | 2.49 | 10.36 |  |
| 500 | 0.30 | 1.21 | 0.30 | 2.75 | 11.10 |  |
| The loads shown on the tables above do not apply to the props used for mid-span support. Mid support props and beams have to be checked separately. Loads shown above to be used in conjunction with tables on pages 32-34. |  |  |  |  |  |  |

Infills crosswise without mid-span support


| Infills crosswise without mid-span support (table size $2.4 \times 5.4 \mathrm{~m}$ ) Loads to DIN EN 12812 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Plywood 21 mm, Quality F25/10 (DIN 68792) |
| Slab thickness [mm] | $\begin{aligned} & \mathbf{e}_{\text {min. }} \\ & {[\mathbf{m}]} \end{aligned}$ | $\begin{gathered} \mathbf{e}_{\text {max. }} . \\ {[\mathbf{m}]} \end{gathered}$ | Timber holders (max. distance) [m] | Additional prop load $_{\text {min. }}$. [kN] | Additional prop load $_{\text {max. }}$ [kN] |  |
| 150 | 0.20 | 0.67 | 0.90 | 0.88 | 2.96 |  |
| 200 | 0.20 | 0.63 | 0.90 | 1.09 | 3.45 |  |
| 250 | 0.20 | 0.60 | 0.60 | 1.30 | 3.50 |  |
| 300 | 0.20 | 0.57 | 0.60 | 1.51 | 4.34 | Safe Working Load (vertical): |
| 350 | 0.20 | 0.55 | 0.60 | 1.74 | 4.81 | TOPMAX Timber Holder: |
| 400 | 0.20 | 0.41 | 0.60 | 1.97 | 4.05 | $\mathrm{V}_{\text {perm. }}=1.90 \mathrm{kN}$ |
| 450 | 0.20 | 0.25 | 0.60 | 2.21 | 2.72 |  |
| 500 | - | - | - | - | - |  |


| Infills crosswise without mid-span support (table size $1.8 \times 5.4 \mathrm{~m}$ ) Loads to DIN EN 12812 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Plywood 21 mm, Quality F25/10 (DIN 68792) |
| Slab thickness [mm] | $\begin{aligned} & \mathbf{e}_{\text {min. }} . \\ & {[\mathrm{m}]} \end{aligned}$ | $\begin{gathered} e_{\text {max }} . \\ {[\mathrm{m}]} \end{gathered}$ | Timber holders (max. distance) [m] | Additional prop load $_{\text {min. }}$. [kN] | Additional prop load $_{\text {max. }}$. [ kN ] |  |
| 150 | 0.20 | 0.67 | 0.90 | 0.66 | 2.22 |  |
| 200 | 0.20 | 0.63 | 0.60 | 0.82 | 2.58 |  |
| 250 | 0.20 | 0.60 | 0.60 | 0.98 | 2.53 |  |
| 300 | 0.20 | 0.57 | 0.60 | 1.13 | 3.26 | Safe Working Load (vertical): |
| 350 | 0.20 | 0.55 | 0.60 | 1.31 | 3.61 | TOPMAX Timber Holder: |
| 400 | 0.20 | 0.53 | 0.60 | 1.48 | 3.94 | $\mathrm{V}_{\text {perm. }}=1.90 \mathrm{kN}$ |
| 450 | 0.20 | 0.52 | 0.30 | 1.65 | 4.27 |  |
| 500 | 0.20 | 0.50 | 0.30 | 1.83 | 4.58 |  |



## Infills crosswise with mid-span support



Infills crosswise with mid-span support (table size $2.4 \times 5.4 \mathrm{~m}$ )
Loads to DIN EN 12812

| Slab thickness [mm] | $\begin{aligned} & \mathbf{e}_{\text {min. }} \\ & {[\mathrm{m}]} \end{aligned}$ | $\begin{aligned} & \mathbf{e}_{\text {max. }} \\ & {[\mathrm{m}]} \end{aligned}$ | Timber holders (max. distance) [m] | ZAdditional prop load $_{\text {min. }}$. [kN] | Additional prop load $_{\text {max. }}$. [kN] | Plywood 21 mm, Quality F25/10 (DIN 68792) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| 150 | 0.30 | 1.66 | 0.90 | 0.50 | 2.75 | $\because \circ \circ \mathrm{O}$ |
| 200 | 0.30 | 1.56 | 0.90 | 0.61 | 3.19 |  |
| 250 | 0.30 | 1.47 | 0.90 | 0.73 | 3.59 |  |
| 300 | 0.30 | 1.40 | 0.60 | 0.85 | 3.58 |  |
| 350 | 0.30 | 1.34 | 0.60 | 0.98 | 4.35 | Safe Working Load (vertical): |
| 400 | 0.30 | 1.09 | 0.60 | 1.11 | 4.05 | TOPMAX Timber Holder: |
| 450 | 0.30 | 0.66 | 0.60 | 1.24 | 2.72 |  |
| 500 | 0.30 | 0.58 | 0.60 | 1.37 | 2.65 |  |


| Infills crosswise with mid-span support (table size $1.8 \times 5.4 \mathrm{~m}$ ) Loads to DIN EN 12812 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Slab thickness [mm] | $\begin{aligned} & \mathbf{e}_{\text {min. }} \\ & {[\mathrm{m}]} \end{aligned}$ | $\begin{gathered} \mathbf{e}_{\text {max }} . \\ {[\mathrm{m}]} \end{gathered}$ | Timber holders (max. distance) [m] | Additional prop load $_{\text {min. }}$ [kN] | Additional prop load $_{\text {max. }}$ [kN] | Plywood 21 mm, Quality F25/10 (DIN 68792) |
|  |  |  |  |  |  |  |
| 150 | 0.30 | 1.66 | 0.90 | 0.37 | 2.06 | $\because \square$ |
| 200 | 0.30 | 1.56 | 0.90 | 0.46 | 2.39 |  |
| 250 | 0.30 | 1.47 | 0.90 | 0.55 | 2.65 | Safe Working Load (vertical): TOPMAX Timber Holder:$V_{\text {perm. }}=1.90 \mathrm{kN}$ |
| 300 | 0.30 | 1.40 | 0.60 | 0.64 | 2.55 |  |
| 350 | 0.30 | 1.34 | 0.60 | 0.74 | 3.29 |  |
| 400 | 0.30 | 1.29 | 0.60 | 0.83 | 3.59 |  |
| 450 | 0.30 | 1.25 | 0.60 | 0.93 | 3.87 |  |
| 500 | 0.30 | 1.21 | 0.30 | 1.03 | 4.14 |  |
| The loads shown on the tables above do not apply to the props used for mid-span support. Mid support props and beams have to be checked separately. <br> Loads shown above to be used in conjunction with tables on pages 32-34. |  |  |  |  |  |  |

## Example for choosing the correct prop for infill areas

Infill lengthwise without mid-span support:

- TOPMAX Floor Table $2.4 \times 5.4$ m
- Slab thickness: 250 mm
- Infill width: 400 mm

In accordance with the table on page 88 and shown again below:

| Infills lengthwise without mid-span support (table size $2.4 \times 5.4 \mathrm{~m}$ ) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :--- | :---: |
| Loads to DIN $\mathbf{E N} 12812$ |  |  |  |  |  |  |  |

- The maximum distance between TOPMAX Tiber Holder (code:603235) is 600 mm .
- The interpolated additional prop load is 6.28 kN .

Using the table shown on page 32 and shown again below:


- For the $2.4 \times 5.4 \mathrm{~m}$ floor table, the maximum load N for the required slab thickness is 26.74 kN.
- In combination with the additional prop load, the total load is 33.02 kN .

Using the tables shown on page 33 and on the following page, it is now possible to choose the suitable prop depending on the required slab height.

## Applications

### 5.8.2 Infills using RASTO panels

Infills lengthwise


Step 1 Insert the Centering Tension Bolt (code:479264) into the hole position on the external profile of the TOPMAX Floor Table. For the maximum distance between bolts, see tables on page 95.

Step 2 Secure using the Centering Nut 100 (code:469566).


Step 3 Repeat steps 1-2 for the other connection positions including on the opposite side of the panel.

Step 4 Repeat steps 1-3 for the other panel positions.


Permissible loads and connection centres

| Infills lengthwise using RASTO/TAKKO Panels (table 2.4 $\times \mathbf{5 . 4} \mathbf{~ m}$ ) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Loads to DIN EN 12812 |  |  |  |  |  |  |$]$

Infills lengthwise using RASTO/TAKKO Panels (table $1.8 \times 5.4$ m)
Loads to DIN EN 12812

| Slab <br> thickness <br> $[\mathbf{m m}]$ | Panel width <br> min. $[\mathbf{m}]$ | Panel width <br> max. $[\mathbf{m}]$ | $\mathbf{Z}_{\text {max. }}$ <br> $[\mathbf{m}]$ | Additional prop <br> $\mathbf{l o a d _ { \text { min. } }}$ <br> $[\mathbf{k N}]$ | Additional prop <br> load <br> $[\mathbf{k N}]$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 150 | 030 | 0.90 | 1.50 | 2.86 | 8.58 |
| 200 | 0.30 | 0.90 | 1.50 | 3.49 | 10.48 |
| 250 | 0.30 | 0.90 | 1.20 | 4.13 | 12.38 |
| 300 | 0.30 | 0.90 | 1.20 | 4.76 | 14.28 |
| 350 | 0.30 | 0.90 | 0.90 | 5.45 | 16.36 |
| 400 | 0.30 | 0.90 | 0.90 | 6.15 | 18.45 |
| 450 | 0.30 | 0.75 | 0.90 | 6.85 | 17.12 |
| 500 | 0.30 | 0.55 | 0.90 | 7.54 | 13.82 |

Infills crosswise


Step 1 Insert the threaded pin of the Centering Tension Bolt (code:479264) into the hole position on the external profile of the TOPMAX Floor Table. For the maximum distance between bolts, see tables on page 97.
Step 2 Secure using the Centering Nut 100 (code:469566).


Step 3 Repeat steps 1-2 for the other connection positions including on the opposite side of the panel.
Step 4 Repeat steps 1-3 for the other panel positions.


Permissible loads and connection centres

| Infills crosswise using RASTO/TAKKO Panels (table $2.4 \times 5.4$ m) Loads to DIN EN 12812 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Slab thickness [mm] | Panel width min. [m] | Panel width max. [m] | $\begin{gathered} \mathbf{Z}_{\text {max. }} \\ {[\mathbf{m}]} \end{gathered}$ | Additional prop load [ $\left.{ }^{\mathrm{m} N} \mathrm{~N}\right]$ | Additional prop load [ ${ }^{\mathrm{KNN}} \mathrm{N}$ ] |
| 150 | 0.30 | 0.90 | 1.50 | 1.42 | 4.24 |
| 200 | 0.30 | 0.90 | 1.50 | 1.74 | 5.22 |
| 250 | 0.30 | 0.90 | 1.20 | 2.05 | 6.16 |
| 300 | 0.30 | 0.90 | 1.20 | 2.37 | 6.86 |
| 350 | 0.30 | 0.60 | 1.20 | 2.72 | 5.43 |
| 400 | 0.30 | 0.30 | 1.20 | 3.06 | 3.06 |
| 450 | --- | --- | --- | --- | --- |
| 500 | --- | --- | --- | --- | --- |


| Infills crosswise using RASTO/TAKKO Panels (table $1.8 \times 5.4$ m) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Loads to DIN EN 12812 |  |  |  |  |  |
| Slab thickness [mm] | Panel width min. [m] | Panel width max. [m] | $\begin{aligned} & \mathbf{Z}_{\text {max }} \\ & {[\mathrm{m}]} \end{aligned}$ | Additional prop load [ $\left.{ }^{[\mathrm{KN}} \mathrm{N}\right]$ | Additional prop load [ ${ }^{\mathrm{KNK}}$ ] |
| 150 | 0.30 | 0.90 | 1.50 | 1.07 | 3.20 |
| 200 | 0.30 | 0.90 | 1.50 | 1.30 | 3.91 |
| 250 | 0.30 | 0.90 | 1.20 | 1.54 | 4.62 |
| 300 | 0.30 | 0.90 | 1.20 | 1.78 | 5.33 |
| 350 | 0.30 | 0.90 | 0.90 | 2.04 | 6.11 |
| 400 | 0.30 | 0.90 | 0.90 | 2.30 | 6.89 |
| 450 | 0.30 | 0.65 | 0.90 | 2.56 | 5.54 |
| 500 | 0.30 | 0.55 | 0.90 | 2.82 | 5.07 |

## Propping RASTO Panels as infills

If required, the TOPMAX Prop Fixing Part (code:603141) can be used for propping the RASTO panels when used as infill panels.

A separate structural calculation is required for the support props.

## WARNING

Risk of damage, collapse and/or serious injury!
Each infill panel must be supported by at least 4no. TOPMAX Prop Fixing Part (code:603141).
TOPMAX Prop Fixing Part (code:603141) must be placed over a rib of the TOPMAX Floor Table, to prevent the prop from falling.

The type, number and position of the EUROPLUSnew Props will vary depending on the job requirements. Refer to the scheme design supplied.

Step 1 Extend a suitable EUROPLUSnew Prop to the required length, see page 29.
Step 2 Insert the TOPMAX Prop Fixing Part (code:603141) into the end of the outer tube of the prop.


Step 3 Secure the head using a TOPEC Bolt. For the appropriate bolt to be used see page 106.


Step 4 Position the prop and head assembly in the required position, see notes on page 98.


Step 5 Repeat steps 1-4 for the other prop positions.

### 5.8.3 Infills using TAKKO panels

## TAKKO G1 Panel connection to the TOPMAX Floor Table

When using TAKKO G1 Panels as infills it is important to know that the hole pattern in the frame of the panels not similar to the one in the TOPMAX Floor Tables. The TAKKO G1 Panel can only be fixed to the TOPMAX Floor Tables using the two holes at the centre of the TAKKO G1 Panel.

For the connection, use the Centering Tension Bolt (code:479264) located on the inside of the external profile of the TAKKO G1 Panel. However, the rib of the TOPMAX Floor Table does not allow for the Centering Nut 100 (code:469566) to be used at both connection points, instead a MANTO MP Nut (code:454670) will have to be used at this position as shown below.


As an alternative to the MANTO MP Nut (code:454670), a Hexagon Nut 15/50 (code:164535) in combination with a Plate $8 / 8$ (code:400214) can be used.


1) MANTO MP Nut
2) Alternative:

Plate 8/8
Hexagon Nut 15/50

## ! WARNING

## Risk of damage, collapse and/or serious injury!

This connection can only be used as an assembly aid. For the distribution of the resulting loads, the TOPMAX Support Girder (code:603390) has to be used, see page 51.

## TAKKO G2 Panel connection to the TOPMAX Floor Table

The TAKKO G2 Panels only require a Centering Tension Bolt (code:479264) and a Centering Nut 100 (code:469566) per connection, due to the fact that the hole pattern of the external profile of the new TAKKO G2 Panel aligns with the pattern of the TOPMAX Floor Table as shown below.



## Propping TAKKO Panels as infills

TAKKO Panels are propped in the same way, using the same components and subjected to the same requirements as the RASTO Panels, see page 98.

### 5.8.4 Infills using TOPEC panels

The TOPMAX-TOPEC Adapter (code:604515) allows for TOPEC panels to be used as infill panels. TOPEC Panels of up to 900 mm can be used on all sides of the TOPMAX table without additional propping of the infill panels.

The TOPMAX-TOPEC Adapter (code:604515) has a SWL of 3.00 kN.


## WARNING Risk of damage, collapse and/or serious injury!

Infills wider than 900 mm are not allowed.
The load bearing capacity of the TOPMAX table and of the propping has to be calculated separately.

## Permissable slab thickness

| Panel size <br> $[\mathrm{mm}]$ | Perm. slab thickness <br> $[\mathrm{mm}]$ | Adapter per panel |
| :---: | :---: | :---: |
| $900 / 1800$ | 220 | 4 |
| $750 / 1800$ | 280 | 4 |
| $600 / 1800$ | 360 | 4 |
| $450 / 1800$ | 500 | 4 |

Step 1 Insert the hook of the TOPMAX-TOPEC Adapter (code:604515) into the slotted holes of the external profiles of the TOPMAX Floor Table.


Step 2 Slot the external profile of the TOPEC panel into the exposed hook of the TOPMAXTOPEC Adapter (code:604515) as shown in the cross-section below.

For each TOPEC Panel at least 2no. TOPMAX-TOPEC Adapter (code:604515) per side have to be used.


The TOPMAX-TOPEC Adapter (code:604515) must be placed at a maximum of 150 mm from the edge of the TOPEC Panel (see below).


## Propping TOPEC Panels as infills

When propping TOPEC panels used as infill panels the TOPMAX Connection Bearing (code:603465) is required for the corners of the TOPMAX tables adjacent to the TOPEC panels. The corners of the TOPEC Panels which are not adjacent to TOPMAX tables require a TOPEC Bearing (code:465410)



For more information regarding TOPEC refer to the separate TOPEC User Guide.

### 5.8.5 Infills between working platforms

Typically the TOPMAX Working Platform provides a safe continuous working platform when adjacent TOPMAX tables are connected to each other, however when an infill is required, the KG Rail Extension (code:498218) can be used to close the gaps of the guardrails.


In markets where timber guardrail are allowed, the working platform is equipped with brackets to hold timber boards which allow a maximum infill width of 1.00 m and a minimum of 0.20 m .

A scaffold board or other timber element which complies with the relevant regulations, can be used as a toe board and secured to the toe boards of the working platform using nails. The minimum overlap of the toe boards is 450 mm .

Step 1 Insert the guardrail extension into the guardrail of the platform.

Step 2 Secure the extension using 1no. Waler Bolt D (code:420000) and a Spring Pin 4 (code:173776).

Step 3 Repeat steps 1-2 for the opposite working platform.


KG Rail Extensions (code:498218) are used to extend the handrails of TOPMAX Working Platform 2.4 m by $\mathrm{X}=0.10$ to 0.50 m and TOPMAX Working Platform 1.8 m by $\mathrm{X}=0.40$ to 0.50 m (measuring from the edge of the Working Platform handrail)

### 5.9 TOPEC Bolts

The following table shows which TOPEC Bolt is required to be used with which EUROPLUSnew Prop.

| Description | Code | $\begin{gathered} \varnothing \\ {[\mathrm{mm}]} \end{gathered}$ | TOPEC <br> Bolt <br> (code:470804) | TOPEC Bolt D14 (code:604365) | TOPEC Bolt Alu 500 (code:569384) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| EUROPLUSnew 20-250 | 601390 | 63.5 | $\checkmark$ | --- | --- |
| EUROPLUSnew 20-300 | 601400 | 63.5 | $\checkmark$ | --- | --- |
| EUROPLUSnew 20-350 | 601410 | 76.1 | --- | $\checkmark$ | $\checkmark$ |
| EUROPLUSnew 20-400 | 601415 | 76.1 | --- | $\checkmark$ | $\checkmark$ |
| EUROPLUSnew 20-550 | 601425 | 88.9 | --- | $\checkmark$ | $\checkmark$ |
| EUROPLUSnew 30-150 | 601460 | 63.5 | $\checkmark$ | --- | --- |
| EUROPLUSnew 30-250 | 601430 | 76.1 | --- | $\checkmark$ | $\checkmark$ |
| EUROPLUSnew 30-300 | 601440 | 76.1 | --- | $\checkmark$ | $\checkmark$ |
| EUROPLUSnew 30-350 | 601445 | 76.1 | --- | $\checkmark$ | $\checkmark$ |
| EUROPLUSnew 30-400 | 601450 | 88.9 | --- | --- | $\checkmark$ |

The table above is applicable only to EUROPLUSnew Props when used with the outer tube up.

Slab edge forms are built with the TOPMAX Stopend Adjuster (code:603379), the TOPMAX Stopend Clamp (code:603432) and the TOPMAX Stopend Angle (code:603375). With the TOPMAX Stopend Clamp (code:603432) the TOPMAX Stopend Adjuster (code:603379) can be adjusted and fixed in height and in depth.


### 5.10.1 TOPMAX Stopend Angle outwards



The TOPMAX Stopend Angle (code:603375) is connected to the TOPMAX Working Platform using the RASTO MP-Bolt (code:485435) through the holes of the platform and secured using 2no. Centering Nuts 100 (code:469566).

Top view


## Bottom view



Each TOPMAX Working Platforms requires 2no. RASTO MP-Bolts (code:485435) and 4no. Centering Nut 100 (code:469566).

### 5.10.2 TOPMAX Stopend Angle inwards

Adjustment range:


The TOPMAX Stopend Angle (code:603375) is secured to the TOPMAX Floor Table outer profile using a Centering Tension Bolt (code:479264) and a Centering Nut 100 (code:469566) located on the inside of the outer profile of the TOPMAX Floor Table (not visible below).


TOPMAX Stopend Angle maximum centres

| Slab thickness [mm] | $\leq 380$ | $\leq 400$ | $\leq 420$ | $\leq 450$ | $\leq 480$ | $\leq 500$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Distance of stopend angles [m] | 2.70 | 2.40 | 2.10 | 1.80 | 1.50 | 1.35 |

The PROTECTO Post 130 Adjustable (code:692750) can be inserted into the TOPMAX Stopend Angle (code:603375) to provide edge protection.


## ( 1 WARNING

## Risk of damage, collapse and/or serious injury!

When using the PROTECTO Post 130 Adjustable (code:692750), the distance between the upper edge of the slab table and the middle of the TOPMAX Stopend Adjuster (code:603379) is to be limited to 250 mm as shown above, so that the locking bolt of the post can latch in the TOPMAX Stopend Angle (code:603375)


Post with
extension 26


Post with extension 42


TOPMAX Stopend Angle maximum centres

| Slab thickness $[\mathrm{mm}]$ | $\leq 380$ | $\leq 400$ | $\leq 420$ | $\leq 450$ | $\leq 480$ | $\leq 500$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Distance of stopend angles $[\mathrm{m}]$ | 1.80 | --- | 0.90 | --- | --- | 0.60 |

For more information regarding edge protection, see page 66.

## 6 Table Transport

### 6.1 Multi Mover

The Multi Mover (code:607150) is an electrically driven trolley. It allows the lifting, adjusting, lowering and transportation of individual TOPMAX Floor Tables, which can be up to a maximum height of 7.50 m .
The Safe Working Load of the Multi Mover (code:607150) is $1,000 \mathrm{~kg}$.
EUROPLUSnew, TOPMAX Extension Frames, GASS props, GASS shoring towers and a PROTECTO or an EXTRAGUARD edge protection may be added to the TOPMAX tables.

## Risk of serious injury!

If the Multi Mover (code:607150) is used to move tables with a height above 3.50 m without the outriggers extended, the floor tables can tilt. Always extend, the use of the outriggers is required and they must be secured with the bolts. The outriggers must be used fully extended when moving tables (see page 117).
The only exception occurs when moving 1.80 m wide tables in close proximity to the wall. The outrigger facing the wall where the table is to be placed can be partially retracted to an intermediate position to allow the table to be placed. Secure the outrigger with the bolt.

It may be possible to move TOPMAX tables with other attachments using the Multi Mover (code:607150) however this requires a separate structural analysis.

In all cases the Multi Mover (code:607150) must be positioned under the centre of gravity of the load to be carried. All loads must be evenly distributed.
Tables must be lowered as low as possible before moving.
Props must have a maximum floor clearance of 100 mm .


## Risk of overturning and serious injuries or death!

The operator has the responsibility to ensure safe operation/drive and must adjust/ reduce speed as required depending on the evenness of ground surface, height and load. There is a significant safety risk of tilting the Multi Mover if the operator does not adjust/reduce speed according to each individual load case.
Overturning the Multi Mover can cause serious injuries or even death.
The operator must be trained to operated the equipment.


For more information regarding how to operate the Multi Mover (code:607150), including extending and retracting the telescopic arm (tower), please refer to the separate Operating Instructions. It can be found behind the lockable service cover of the Multi Mover (code:607150).

### 6.1.1 Overview



### 6.1.2 Lifting and transportation

## Lifting by crane

Crane hooks with safety latches are only allowed to be hooked into the crane lifting eyes, marked in red, at the base of the telescopic arm (tower) of the Multi Mover (code:607150). For lifting by crane, all four crane eyes of the Multi Mover (code:607150) are to be connected with the lifting gear (use four-fold crane suspension).


## Transport by lorry

Lashing must only be carried out on the red crane lifting eyes (see image above).
Housing parts must not be lashed. This may damage the housing and does not provide
sufficient transport protection.
The outriggers must be transported in the fully retracted position and secured with the
outrigger bolts.

## Transport by forklift

The outriggers have to be removed (see page 117), so that the outrigger rails can be used as pockets for the forks.
The forks of the forklift must go into the outrigger rails when using a forklift to move
the Multi Mover (code:607150). Both outrigger rails must be used by the forks.
Do not use any other surface of the Multi Mover (code:607150) when using the forklift.

### 6.1.3 Use of the Multi Mover

The notes below must be followed when using the Multi Mover (code:607150):

- The Multi Mover (code:607150) must only be operated and maintained by competent persons.
- It is not allowed to operated the Multi Mover (code:607150) with any cover open.
- The Multi Mover (code:607150) must only be used if the operating instructions are present at the place of usage.
- It is not allowed to transport persons on the Multi Mover (code:607150).
- The Multi Mover (code:607150) must only be used on clean, free of debris solid and level base (e.g.: a dry concrete floor without ridges and edges, without open shafts for cables and pipe systems or overground cables, pipes and/or other material).
- The base must be flat. Driving with a load on an inclined surface is not allowed.
- The maximum manoeuvring speed without load in the normal direction (lengthwise) is $3 \mathrm{~km} / \mathrm{h}$ and in the sidewise direction is $2 \mathrm{~km} / \mathrm{h}$.
- The manoeuvring speed with load must be reduced accordingly so that the Multi Mover (code:607150) does not tip to prevent the load from shifting.
- Any improper use is forbidden.
- Any changes or repairs to the Multi Mover (code:607150) without permission are forbidden.
- The Multi Mover (code:607150) must be submitted to a yearly check by an expert person. The check must be documented in writing and indicated on the Multi Mover (code:607150) with a test badge.


## Documentation to be followed:

- TOPMAX User Guide from Hünnebeck.
- Relevant occupational safety and accident prevention regulations and standards.
- Operating instructions.
- Other local regulations / standards such as: VDMA Rules for operating companies of floor-level conveyors.


### 6.1.4 Operator's responsibility

The Multi Mover (code:607150) complies with the EC machinery directive and the approved safety-related regulations.

The Multi Mover (code:607150) must only be operated by the assigned and qualified persons.

### 6.1.5 Special duties and obligations of the operating company of the Multi Mover

- The operating company has to ensure that all staff members handling the Multi Mover (code:607150) have read and understood the operating instructions.
- The operating company is responsible for always keeping the Multi Mover (code:607150) in technically perfect and clean condition.
- The operating company has to take care that the maintenance intervals described in the operating instructions are met.
- The operating company is obliged to have regularly checked the operative readiness and integrity of all safety devices.
- The operating company has to ensure that all warnings and information listed in the operating instructions are observed.
- The operating company has to appoint staff members supervising the compliance with safety, accident prevention and environmental regulations in the area of use of the Multi Mover (code:607150).
- The operating company must regularly train the employees dealing with the Multi Mover (code:607150), provide information about regulations and risks, and to punish infringement of the regulations
- The operating company must clearly structure and define the responsibilities regarding operation, maintenance, check, repair and servicing of the Multi Mover (code:607150).
- The operating company must obtain information on the valid industrial safety regulations, and to determine by means of risk assessment the additional risks resulting from the special working conditions at the operating site of the Multi Mover (code:607150). These must be converted into operating instructions for operating the Multi Mover.
- During the entire time of application of the Multi Mover (code:607150), the operating company has to ensure that the all requirements of the operating instructions and of this product information are met.


### 6.1.6 Permit for commissioning and operation

Commissioning and operation of the Multi Mover (code:607150) is only allowed to assigned and qualified persons sufficiently instructed in the operation of the electrical lifting trolley, who have read and understood the operating manual, and know and observe all other applicable regulations.

## The training given have to include the following:

- Knowledge of the content of the operating manual and of the product information to ensure a qualified operation of the Multi Mover (code:607150).
- Knowledge and execution of specifications and regulation resulting from all other applicable regulations for operating the Multi Mover (code:607150).
- A list of suitably qualified persons must be available. It should contain the names and signatures of the qualified employees and the date of the training. The list should be kept by the operating company and can be consulted upon request.


### 6.1.7 Permit for maintenance of the Multi Mover and intervention in the vehicle

Only trained and qualified personnel are allowed to carry out maintenance and interventions in the Multi Mover (code:607150). They should meet the following requirements:

- Specialist for maintenance and check

Due to technical training, knowledge and experience, and knowledge of the relevant provisions is capable to execute the works of maintenance and check on the Multi Mover (code:607150) delegated to him, and to independently recognise and avoid possible risks.

## - Professional electrician

Has the ability because of their technical training and experience, as well as knowledge of the relevant standards and provisions, to carry out works on electrical installations, and to independently recognise and avoid possible risks.

- Specialists for repairs (servicing)

Because of their technical training, advanced knowledge and experience, as well as awareness of the relevant provisions, they are able to carry out the assigned repair works on the Multi Mover (code:607150), and to independently recognise and avoid possible risks.

### 6.1.8 Minimum and maximum heights

The Multi Mover (code:607150) can move tables with a maximum table height of 4.50 m without the Multi Mover Extension Frames (code:607152). With the TOPMAX Extension Frames (code:603479) or the Multi Mover Extension Frames (code:607152) the Multi Mover (code:607150) can move tables with a maximum height of 7.50 m . The Multi Mover Extension Frame (code:603479) provides a height extension of 1.00 m as shown below.



### 6.1.9 Operating the Outriggers

The outriggers are a part of the Multi Mover (code:607150) and must be extended when moving TOPMAX tables higher than 3.50 m .

The outriggers are used to prevent the Multi Mover (code:607150) from tilting. There are 2 no. positions to which the outriggers can be extended, fully extended or slightly retracted from the maximum extension. Whilst transporting tables, the outriggers must always be in the fully extended position. The second position, slightly retracted, allows the table to be placed close to a wall and can only be used with the 1.80 m wide tables.

The outriggers are secured using the handle bolt located on the outrigger rails.
Operating the Multi Mover (code:607150) with the outriggers extended requires a very level and clean ground due to the reduced ground clearance.

The support wheels of the outriggers do not touch the ground. This only happens when the Multi Mover (code:607150) is at risk of overturning

Step 1 Turn the handle bolt as shown below.


Step 2 Pull the bolt out and keep it for later use.


Step 3 Slide the outriggers out to the required position.


Step 4 Align the hole positions of the outriggers with the hole of the rails, see warning on page 110.


Step 5 To secure the outrigger insert the bolt into the hole position on the rail and turn the handle bolt.


Step 6 Turn the bolt to secure the outrigger.


Step 7 Repeat steps 1-6 for the other outrigger.
To remove the outriggers (for transportation by forklift truck for example), follow steps $1-2$, remove the outriggers and place the bolt into the outrigger.

### 6.1.10 Attaching the TOPMAX Turning Heads

A set of 4no. TOPMAX Turning Heads with 4no Readjusting Springs (code:607160) are used for lifting TOPMAX Floor Tables.

If TOPMAX Floor Tables with beams mounted underneath, e.g. TOPMAX Support Girders (code:603390), the height of the turning heads on the Multi Mover (code:607150) can be extended to 220 mm (see below).
The tube allows for the head to be positioned in two height positions as shown below.


Turning Heads when TOPMAX tables have underslung beams present.

A suitable method for work at height must be provided, i.e. scaffold, Mobile Elevating Work Platforms (MEWP), etc., so that all operations can be performed from a safe working platform. Do not stand on the Multi Mover (code:607150).

Step 1 Remove the locking pin located on the frame.


Step 2 Adjust the height of the positioning tube.


Step 3 Align the hole position on the tube with the hole position of the frame and re-insert the locking pin in the original hole position.


Step 4 Attach the head by inserting the sleeve on the bottom of the head into the positioning tube.


Step 5 Repeat steps 1-4 for the opposite side or only step 4 if height doesn't need to be adjusted.

Step 6 Secure opposing heads by attaching 2no. Readjusting Springs (code:603303) into the eyes under the top plate of the heads.


Step 7 Repeat steps 1-6 for the other side of the Multi Mover (code:607150) frame.

### 6.1.11 Attaching the Multi Mover Extension Frames

A removable Multi Mover Extension Frame (code:607152) is available for the Multi Mover (code:607150) for the purpose of transporting TOPMAX Floor Tables of greater height. The Multi Mover Extension Frame (code:607152) remains firmly connected to the Multi Mover (code:607150) during operation.

A suitable method for work at height must be provided, i.e. scaffold, Mobile Elevating Work Platforms (MEWP), etc., so that all operations can be performed from a safe working platform. Do not stand on the Multi Mover (code:607150).

If the TOPMAX Turning Heads (code:603237) are installed on the Multi Mover (code:607150) they must be removed before assembly of the extension frames. To do so repeat the turning heads assembly process in the reverse order 119 ) until all heads are removed.

Next the Multi Mover Extension Frame (code:607152) must be extended and braced before being assembled onto the Multi Mover (code:607150).

Step 1 Attach the crane hooks with safety latches to the Multi Mover Extension Frame (code:607152) using the attachment points as shown. Move the Multi Mover Extension Frame (code:607152) to the ground with the help of a crane.


Step 2 Once the frame is on the ground, remove both locking bolts and spring pins. Keep them for later use.


Step 3 Whilst the Multi Mover Extension Frame (code:607152) is pulled upwards by the crane, pull the frame open by hand.

## Risk of crushing!

Operatives must wear gloves and take care not to allow any extremities (hands and fingers for example) to be caught by the swivel parts of the frame.

It is recommended that this operation is done by at least two people.


Step 4 Fully open the extension frame and secure the hinge on each side with the locking bolts and spring pins.


Step 5 Attach the Guardrail 200 (code:154080) braces to the anti-luce fittings. The braces are ordered separately.


Step 6 The crane slings can be released after the frame is securely fastened.
Step 7 Attach the TOPMAX Turning Heads (code:603237) in similar way as the Multi Mover Extension Frame (code:607152).


Step 8 Attach the crane slings to the outer attachment points located on the top corners of the frame.


Step 9 Lift the frame into the connecting pins on top of the Multi Mover (code:607150) and secure using the Multi Mover Locking Pins (code:607156), R-safety clips not shown, at the bottom corners. The pins are ordered separately.

The Multi Mover (code:607150) telescopic arm (tower) must be in its most retracted position. See also warning on page 110 regarding the outriggers.


Ensure that all connections are secure and that all bolts and safety pins are securely fastened before releasing the slings.

## WARNING

## Risk of overturning!

Fast movements of the control unit and careless driving, especially in curves, can cause floor tables and the Multi Mover (code:607150) to overturn.

This can result in serious injury or death.
Ensure that, if possible, no persons are present in the danger zone.
Drive very carefully
Drive particularly slow in curves.
Pay attention to the load and counteract if necessary.
In case of danger, stop and set down the load.

## Lifting and moving TOPMAX Floor Tables with EUROPLUSnew Props

Tables with and without mounted TOPMAX Extension Frames (code:603479) can be moved with the Multi Mover (code:607150).

Floor tables without the TOPMAX Extension Frames (code:603479) must be lifted using the mounted TOPMAX Turning Heads (code:603237) and Readjusting Springs (code:603303)

For the maximum table height allowed to be moved see page 128.
Lifting and moving TOPMAX Floor Tables with TOPMAX Extension Frame
Floor tables with the TOPMAX Extension Frame (code:603479) must be supported by H 20 beams 3.90 m long.

If turning heads have been assembled beforehand on the Multi Mover (code:607150) frame, first disassemble these. To do so, repeat the turning heads assembly process in the reverse order 119) until all heads are removed

For the maximum table height allowed to be moved see page 128.
Step 1 Place 2no. H 20 Beams (code:581829) on top of the support plates of the frame as shown below.

Step 2 Secure the beams to all support plates using 4no. H 20 Beam Clamps (code:568048).
Step 3 Attach 2no. Joist Clamping Connectors (code:496469) to each H2O Beam so that the extension frame can be placed in-between the clamps.


H 20 Beam Clamp attached to the support plate


H 20 Beam

Ensure that the position of the Joist Clamping Connectors (code:496469) is such that the load to be lifted can be located centrally on the lifting equipment.

Step 4 Move the Multi Mover (code:607150) under the centre of gravity of the table.


Step 5 Extend the outriggers, see page 117.
Step 6 Extend the telescopic arm (tower) until the extension frame is supported.


For more information regarding how to operate the Multi Mover (code:607150), including extending and retracting the telescopic arm (tower), please refer to the separate Operating Instructions.

Step 7 Lift and move the TOPMAX table.


Tables must be lowered as low as possible before moving.
Props must have a maximum floor clearance of 100 mm .

## WARNING

## Risk of damage, collapse and/or serious injury!

To avoid overturning the maximum height that is allowable to be moved using the Multi Mover (code:607150) is 7.50 m . Do not stack the TOPMAX Extension Frame with more than one Multi Mover Extension Frame.

## Lifting and moving TOPMAX Floor Tables with GASS Props

When moving TOPMAX tables with GASS props, H 20 Beams must be attached to the Multi Mover (code:607150) frame or to the top Multi Mover Extension Frame (code:607152). The procedure for this is identical to that for the transportation of tables with TOPMAX Extension Frames (code:603479), see page 125.

GASS Tables to be used when the maximum capacity of the EUROPLUSnew is exceeded.

When installing the GASS props and frames, the minimum height of the Multi Mover (code:607150) must be considered (see page 114):

- Without Multi Mover Extension Frames (code:607152): minimum 2.00 m;
- With Multi Mover Extension Frames (code:607152): minimum 3.00 m.

The frames must be mounted in such a way that the Multi Mover (code:607150) with mounted H 20 Beams can be moved underneath the table. A 50 mm minimum clearance should be considered. It might be required to remove the lower GASS Frames in order to provide access and operate the Multi Mover (code:607150).

The GASS frames on which the Multi Mover (code:607150) picks up the system must be at the same height and well tightened.
For the maximum table height allowed to be moved see page 128.

## NOTICE

## Risk of damage to components!

If single GASS Legs are used with the TOPMAX Floor Tables, the legs must not be swung when moving the table and must remain in the vertical position at all times.

## WARNING

## Risk of overturning and serious injuries or death!

To avoid overturning the maximum height that is allowable to be moved using the Multi Mover (code:607150) is 7.50 m . Do not exceed the SWL of the Multi Mover (code:607150), see page 110.

Some possible table configurations and height restrictions are as follows:

## Configuration 1 - Max. Height: 7.50 m



1. TOPMAX Floor Table $2.4 \times 5.4 \mathrm{~m}$ (code: 602586 )
2. TOPMAX Extension Frame (code:603479)
3. EUROPLUSnew 20/550 (code:601425)
4. Multi Mover Extension Frame (code:607152)
5. H2O Beams 3.90 m (code:581829)

## Configuration 2 - Max. Height: 5.50 m



1. TOPMAX Floor Table $2.4 \times 5.4 \mathrm{~m}$ (code:602586)
2. RASTO Panels ( 300 mm wide) *
3. EUROPLUSnew 20/550 (code:601425)
4. Multi Mover Extension Frame (code:607152) with Turning Heads (code:607160)

*     - Do not exceed the stated width.

For the connection of RASTO Panels to TOPMAX Floor Table see page 51.

For more information regarding the RASTO system, please refer to the current User Guide.

## Configuration 3 - Max. Height: 3.50 m



1. TOPMAX Floor Table $2.4 \times 5.4 \mathrm{~m}$ (code:602586)
2. RASTO Panels ( 600 mm wide) *
3. EUROPLUSnew 30/350 (code:601445)

** - Multi Mover with Turning Heads (not visible)


For more information regarding the RASTO system, please refer to the current User Guide.

## Configuration 4A - Max. Height: 7.50 m

The GASS Leg make-up shown bellow allows for a maximum table height of 7.90 m , however the table must not exceed a height of 7.50 m when being moved.


1. TOPMAX Floor Table $2.4 \times 5.4$ m (code:602586)
2. GASS Extension Leg 2490 mm (code:718009)
3. GASS Leg 3580 mm (code:718003) *
4. GASS Inner Leg 1450 mm (code:718014)
5. GASS Ledger Frame 3.0 m (code:718023)
6. GASS Ledger Frame 1.2 m (code:718020)
7. Multi Mover Extension Frame (code:607152)
8. H2O Beams 3.90 m (code:581829)
9. Joist Clamping Connector (code:496469)

*     - A program to retrofit existing GASS outer legs with the double latch arrangement is underway, during this retrofit period both single and double latch outer legs will be in our stocks. Both options are interchangeable however the separate Safety Latch (code:718907) must be used on all single latch legs when lifting or flying.

A - Before moving the table, the GASS Ledger Frame 1.2 m (code:718020) must be temporarily removed to allow for the arm of the Multi Mover to be operated.

For more information regarding the GASS system including the maximum capacity of the GASS towers, please refer to the current User Guide.

## Configuration 5 - Max. Height: $\mathbf{6 . 5 0} \mathbf{~ m}$

The GASS Leg make-up shown bellow allows for a maximum table height of 7.90 m , however the table must not exceed a height of 6.50 m when being moved.


1. TOPMAX Floor Table $2.4 \times 5.4 \mathrm{~m}$ (code:602586)
2. RASTO Panels ( 300 mm wide) *
3. GASS Extension Leg 2490 mm (code:718009)
4. GASS Leg 3580 mm (code:718003) **
5. GASS Inner Leg 1450 mm (code:718014)
6. GASS Ledger Frame 3.0 m (code:718023)
7. GASS Ledger Frame 1.2 m (code:718020)
8. H20 Beams 3.60 m (code:581818)
9. Joist Clamping Connector (code:496469)

| $\square$ | ${ }^{*}$ - Do not exceed the stated width. |
| :--- | :--- |
| For the connection of RASTO Panels to TOPMAX Floor Table see page 51 |  |

${ }^{* *}$ - A program to retrofit existing GASS outer legs with the double latch arrangement is underway, during this retrofit period both single and double latch outer legs will be in our stocks. Both options are interchangeable however the separate Safety Latch (code:718907) must be used on all single latch legs when lifting or flying.

A - Before moving the table, the GASS Ledger Frame 1.2 m (code:718020) must be temporarily removed to allow for the arm of the Multi Mover to be operated.

For more information regarding the GASS system including the maximum capacity of the GASS towers, please refer to the current User Guide.

## Configuration 6 - Max. Height: $\mathbf{5 . 5 0}$ m

The GASS Leg make-up shown bellow allows for a maximum table height of 5.90 m , however the table must not exceed a height of 5.50 m when being moved.


1. TOPMAX Floor Table $2.4 \times 5.4$ m (code:602586)
2. RASTO Panels ( 600 mm wide) *
3. GASS Extension Leg 2490 mm (code:718009)
4. GASS Leg 3580 mm (code:718003) **
5. GASS Inner Leg 1450 mm (code:718014)
6. GASS Ledger Frame 3.0 m (code:718023)
7. GASS Ledger Frame 1.2 m (code:718020)
8. H20 Beams 3.60 m (code:581818)
9. Joist Clamping Connector (code:496469)


*     - Do not exceed the stated width.

For the connection of RASTO Panels to TOPMAX Floor Table see page 51.
** - A program to retrofit existing GASS outer legs with the double latch arrangement is underway, during this retrofit period both single and double latch outer legs will be in our stocks. Both options are interchangeable however the separate Safety Latch (code:718907) must be used on all single latch legs when lifting or flying.

A - Before moving the table, the GASS Ledger Frame 1.2 m (code:718020) must be temporarily removed to allow for the arm of the Multi Mover to be operated.

### 6.2 Positioning Unit

Standard assemblies (loading frames) made using components from the MODEX modular scaffold system and 2no. TOPMAX Positioning Units can be used to easily assemble a positioning unit. These units are used with the TOPMAX Floor Tables and meet the requirements of the building site. The units are operated manually and the vertical lifting and lowering as well as the horizontal transport typically requires two persons.

There are 2no. types of positioning units, the TOPMAX Positioning Unit build using the TOPMAX Lifting Jack Carriage (code:603226) and the TOPMAX Positioning Unit 750 build using the TOPMAX Lifting Jack Carriage 750 (code:607111).

For moving and lifting the TOPMAX Floor Tables, the TOPMAX Positioning Unit is placed underneath and centred with the table which is still in the raised position. Use the winches of the TOPMAX Positioning Unit to raise the height and bring the turning heads in contact with the TOPMAX Floor Table.


Release the props of the TOPMAX Floor Table using the quick release and slide in the inner tubes to allow the TOPMAX Positioning Unit to reach its lowest position. The integrated winches of the TOPMAX Positioning Unit allow a vertical adjustment range of 0.93 m .


In all cases the Positioning Units must be placed centrally under the table. All loads to be carried must be evenly distributed.
Tables must be lowered as low as possible before moving.
Props must have a maximum floor clearance of 100 mm .

For more information regarding the TOPMAX Positioning Unit, including assembly, operation and transport, refer to the separate Operating Instructions.

### 6.2.1 TOPMAX Positioning Unit

The TOPMAX Positioning Unit is build using the 2no. TOPMAX Lifting Jack Carriage (code:603226) with a MODEX Assembly Type 1 (schedule shown below) and is used to lift tables no higher than 3.00 m.

Safe Working Loads:

- 10.00 kN (per trolley)
- 20.00 kN (per Positioning Unit)


The MODEX Assembly Type 1 (loading frame) is made of the following components:

| Component | Quantity | Part code |
| :--- | :---: | :---: |
| TOPMAX Lifting Jack Carriage | 2 | 603226 |
| TOPMAX Turning Head | 4 | 603237 |
| TOPMAX Readjusting Spring | 4 | 603303 |
| Tube Ledger 82 | 4 | 470930 |
| Tube Ledger 200 | 4 | 475781 |
| Vertical Post 150 | 4 | 470881 |
| V-diagonal 100/200 | 2 | 651659 |
| H Diagonal 200/82 | 2 | 651623 |
| Shear Force Securing Device | 16 | 577988 |

The total weight of the assembly is 334.46 kg .

## Risk of damage, collapse and/or serious injury!

TOPMAX Floor Tables higher than 3.00 m must only be moved with the TOPMAX Positioning Unit 750 or the Multi Mover (code:607150).

### 6.2.2 TOPMAX Positioning Unit 750

The TOPMAX Positioning Unit 750 is build using the 2no. TOPMAX Lifting Jack Carriage 750 (code:607111) with several types of MODEX Assemblies.
Safe Working Load: TOPMAX table $2.4 \times 5.4 \mathrm{~m}=13.10 \mathrm{kN}$ (for table and MODEX frame).
TOPMAX Positioning Unit 750 Type 1 ( 2.00 m to 2.95 m)


| Component | Quantity | Part code |
| :--- | :---: | :---: |
| TOPMAX Lifting Jack Carriage 750 | 2 | 607111 |
| TOPMAX Turning Head | 4 | 603237 |
| TOPMAX Readjusting Spring | 4 | 603303 |
| Tube Ledger 82 | 4 | 470930 |
| Tube Ledger 200 | 4 | 475781 |
| Vertical Post 150 | 4 | 470881 |
| V-diagonal 100/200 | 2 | 651659 |
| H Diagonal 200/82 | 2 | 651623 |
| Shear Force Securing Device | 16 | 577988 |

The total weight of the assembly is 578.84 kg .
TOPMAX Positioning Unit 750 Type 2 ( 2.37 m to $\mathbf{3 . 4 4}$ m)


| Component | Quantity | Part code |
| :--- | :---: | :---: |
| TOPMAX Lifting Jack Carriage 750 | 2 | 607111 |
| TOPMAX Turning Head | 4 | 603237 |
| TOPMAX Readjusting Spring | 4 | 603303 |
| Tube Ledger 200 | 6 | 475781 |
| Tube Ledger 82 | 6 | 470930 |
| Vertical Post 200 | 4 | 470892 |
| V-diagonal 100/200 | 2 | 651659 |
| H Diagonal 200/82 | 1 | 651623 |
| Shear Force Securing Device | 24 | 577988 |

The total weight of the assembly is 613.10 kg .

TOPMAX Positioning Unit 750 Type 3 ( 3.37 m to 4.44 m)


| Component | Quantity | Part code |
| :--- | :---: | :---: |
| TOPMAX Lifting Jack Carriage 750 | 2 | 607111 |
| TOPMAX Turning Head | 4 | 603237 |
| TOPMAX Readjusting Spring | 4 | 603303 |
| Vertical Post 300 | 4 | 470907 |
| Tube Ledger 82 | 8 | 470930 |
| Tube Ledger 200 | 6 | 475781 |
| V-diagonal 200/200 | 2 | 475910 |
| V-diagonal 100/200 | 2 | 651659 |
| H Diagonal 200/82 | 1 | 651623 |
| Shear Force Securing Device | 28 | 577988 |

The total weight of the assembly is 664.62 kg .
TOPMAX Positioning Unit 750 Type 4 (4.37 m to 5.44 m)


| Component | Quantity | Part code |
| :--- | :---: | :---: |
| TOPMAX Lifting Jack Carriage 750 | 2 | 607111 |
| TOPMAX Turning Head | 4 | 603237 |
| TOPMAX Readjusting Spring | 4 | 603303 |
| V-diagonal 100/200 | 4 | 651659 |
| Tube Ledger 82 | 10 | 470930 |
| Vertical Post 400 | 4 | 470918 |
| Tube Ledger 200 | 8 | 475781 |
| V-diagonal 200/200 | 2 | 475910 |
| H Diagonal 200/82 | 1 | 651623 |
| Shear Force Securing Device | 36 | 577988 |

The total weight of the assembly is 728.10 kg .
TOPMAX Positioning Unit 750 Type 5 ( 3.41 m to $4.48 \mathrm{~m}+2.00 \mathrm{~m}$ Extension Frames)


| Component | Quantity | Part code |
| :--- | :---: | :---: |
| TOPMAX Lifting Jack Carriage 750 | 2 | 607111 |
| H 20 K-Beam 390 to move longitudinally under scaffold <br> or H 20 K-Beam 190 to move laterally under scaffold | 2 | 603195 |
| Crosshead Jack 70/3.8×6.3 | 4 | 603190 |
| Vertical Post 100 L | 4 | 552184 |
| Screw M12x75 with nut | 4 | 553645 |
| Tube Ledger 82 | 8 | 470930 |
| Vertical Post 200 | 4 | 470892 |
| Tube Ledger 200 | 6 | 475781 |
| V-diagonal 200/200 | 2 | 475910 |
| V-diagonal 100/200 | 2 | 651659 |
| H Diagonal 200/82 | 1 | 651623 |
| Shear Force Securing Device | 28 | 577988 |

The total weight of the assembly is 701.70 kg .

TOPMAX Positioning Unit 750 Type 6 ( 4.41 m to 5.48 m + 2.00 m Extension Frames)


| Component | Quantity | Part code |
| :--- | :---: | :---: |
| TOPMAX Lifting Jack Carriage 750 | 2 | 607111 |
| H 20 K-Beam 390 to move longitudinally under scaffold <br> or H 20 K-Beam 190 to move laterally under scaffold | 2 | 603195 |
| Crosshead Jack 70/3.8×6.3 | 403190 |  |
| Vertical Post 100 L | 4 | 652184 |
| V-diagonal 100/200 | 4 | 553645 |
| Screw M12x75 with nut | 4 | 651659 |
| Tube Ledger 82 | 10 | 454710 |
| Vertical Post 300 | 4 | 470930 |
| Tube Ledger 200 | 8 | 475781 |
| V-diagonal 200/200 | 2 | 475910 |
| H Diagonal 200/82 | 1 | 651623 |
| Shear Force Securing Device | 36 | 577988 |

The total weight of the assembly is 765.34 kg .

## TOPMAX Lifting Carriage $\mathbf{7 5 0}$ with GASS towers

TOPMAX Table Forms with GASS shoring systems up to 7.50 m high can be moved with two TOPMAX Lifting Jack Carriages. Two persons are needed to operated the two Lifting Jack Carriages, one person for each Lifting Jack Carriage.
A WARNING

Risk of tipping over when GASS frames are loose!
The TOPMAX table can tip over as it is lifted if the GASS frames are not properly secured!

This can cause personal injury or death!
Before lifting, check that all wedge connections at the lower level of the GASS frames are properly locked!


For more information regarding the TOPMAX Positioning Unit, including assembly, operation and transport, refer to the separate Operating Instructions.

To be able to move the Lifting Jack Carriage 750 under the GASS frames, the GASS frames (lower edge) have to be $0.59 \mathrm{~m}-1.50 \mathrm{~m}$ off the ground. Once the GASS frames have been connected to the Lifting Jack Carriage, the GASS assembly can be lowered to 0.55 m from the ground.
The adjustment range (lift) of the trolley is $0.55 \mathrm{~m}-1.62 \mathrm{~m}$.

Safe Working Loads:

- GASS Tower w/ table $2.4 \times 5.4$ m: 8.00 kN .



### 6.3 TOPMAX Electric Table Jack Lift

With the TOPMAX Electric Table Jack Lift (code:603600) TOPMAX Floor Tables can be lifted, horizontally transported and precisely positioned.

## Main features

- Operated by only one person
- Max. load: 12.50 kN
- The capacity of a fully charged battery allows a normal operation time of 8 to 10 hours.
- Integrated battery charger (230 Volts)
- Defined safe pick points for the crane
- Built in safety devices
- Motorized positioning mechanism for precise positioning of the tables in cross direction.


| Pos. | Description | Pos. | Description |
| :--- | :--- | :--- | :--- |
| 1 | Power circuit-breakers | 11 | Emergency switch |
| 3 | Charge level indicator | 12 | Lifting table |
| 4 | Shaft with shaft head | 13 | Battery charger |
| 5 | Button slow running | 14 | Front hood |
| 6 | Speed control | 15 | Stabilizer wheels |
| 7 | Collision safety button | 16 | Wheel arm |
| 8 | Lifting beam | 17 | Drive wheel |
| 9 | Protective glass | 18 | Side shifting device |
| 10 | Battery cover |  |  |

After driving through the props place the lifting table centered under the floor table. Use the marking for the center of gravity and the turning heads on the jack lift side as reference points. Adjust the marking for the centre of gravity to the centre of the floor table. The distances to the edges have to be as equal as possible.


* $\mathrm{h} 1=$ minimum height above turning heads $=1,98 \mathrm{~m}$ $\mathrm{h} 2=$ maximum height above turning heads $=4,48 \mathrm{~m}$ $\mathrm{h} 3=$ maximum height above turning heads with extended lifting device $=5,38 \mathrm{~m}$

| I. WARNING | Warning! |
| :--- | :--- |
| Follow the separate operating instructions of the TOPMAX Electric Table Jack Lift. |  |

If the two rear turning heads are used for aligning these are placed underneath the next cross rib behind the props.

## NOTE

## Note!

In this position, the marking of the center of gravity is exactly centric underneath the formwork.


Min. height: $1,98 \mathrm{~m}$
Max. height: 5,38 m

## NOTE

## Note!

To reach the highest position the lifting table must be extended. See the separate operating instructions of the TOPMAX Electric Table Jack Lift.

### 6.3.1 Transport of floor tables with extension frames

To transport the extension frame remove the turning heads and equip the TOPMAX Electric Table Jack Lift with the following additional parts as shown:

2no. TOPMAX EHW H 20 Table Carrier (code:603568)
2no. H 20 Beam 3.90 m (code:581829)
4no. H 20 Timber Beam Clamp (code:568048)
4no Joist Clamping Connectors (code:496469). Connectors not shown, see step 3 of page 125.



With this assembly it is also possible to pass the props with the table jack lift to pick up the table.

Warning!
For transport lower tables max. Only pick up and transport single tables!

After picking up the table push in the props to allow the maximum lowering of the table jack lift.


## Warning!

The ground clearance of the props during transport has to be limited to max. 100 mm !

Lifting

## 7 Lifting

### 7.1 TOPMAX Crane Suspension

The TOPMAX Crane Suspension (code:603050) is use for loading and unloading of stacked TOPMAX Floor Tables and for the transport of single tables on site.

The Working Load Limit of the TOPMAX Crane Suspension is 5.00 kN .
TOPMAX Crane Suspension


The attachment points (holes) must be in a safe and faultless condition. To crane lift TOPMAX Floor Tables, 4no. TOPMAX Crane Suspension (code:606050) attached to the long outer profile of the TOPMAX Floor Table are required. The maximum distance between attachment points is 2.70 m and the minimum distance is 2.10 m , equally distanced from both ends of the profile and symmetrical to the other side. This arrangement must be done in such a way that the self weight of the tables is evenly distributed between the attachment points.


Step 1 Align the T bolt of the TOPMAX Crane Suspension (code:603050) with the required hole position. See notes on page 144.


Step 2 Insert the T bolt on the hole position. Push to ensure that the safety pin retracts.


Step 3 Rotate the TOPMAX Crane Assembly (code:603050) until the safety pin springs into the hole. A "click" sound will be audible and it will signal that the pin has been pushed out.


The safety bolt of the TOPMAX Crane Suspension (code:603050) needs to lock in clearly. If it doesn't, the TOPMAX Crane Suspension (code:603050) must be shifted to the left. When the TOPMAX Crane Suspension (code:603050) is connected, a function test is to be done (turning) to ensure the shape of the slotted hole is not damaged and the TOPMAX Crane Suspension (code:603050) is engaged correctly.

## Dismantling the TOPMAX Crane Suspension

Step 1 Pull and hold the round pin handle to allow for the pin to retract enough so that the TOPMAX Crane Suspension (code:603050) can rotate.

Step 2 Rotate the TOPMAX Crane Suspension (code:603050) to the horizontal position.
Step 3 Pull the TOPMAX Crane Suspension (code:603050) out of the hole position.
For more information regarding the TOPMAX Crane Suspension, refer to the separate Operating Instructions.

## Lifting

| A. WARNING |
| :--- |
| Rever use the TOPMAX Crane Suspension attached to the shorter outer profile. |
| TOPMAX Floor Tables are to be lifted as a single panel or as a bundle of no more than |
| 4no. panels. |
| When lifting more than one panel, the units must be banded together. |
| If a bundle of TOPMAX Floor Tables is to be lifted, always attach the TOPMAX Crane |
| Suspension to the panel at the bottom of the bundle. |
| Never transport connected TOPMAX Floor Tables. |



### 7.2 TOPMAX Lifting Fork

Transporting TOPMAX Floor Tables by crane using the TOPMAX Lifting Fork (code:603074) is easy, safe and very efficient. In this way, the TOPMAX Floor Tables are optimally transported horizontally and vertically on site.

When stripping the formwork the transport out of the building is also easy to handle.


The TOPMAX Floor Table can be lifted from the short side as well as from the long side.


For more information regarding the TOPMAX Lifting Fork (code:603074), including assembly, operation and transport, refer to the separate Operating Instructions.

## Risk of damage, collapse and/or serious injury!

The TOPMAX Lifting Fork (code:603074) must be folded when stored temporarily on site, as shown below. This can be achieved regardless of the vertical post used on the fork.


## Vertical Post 600

The UG Vertical Post 600 (code:603596) is an accessory of the TOPMAX Lifting Fork (code:603074) and replaces the standard UG Vertical Post (code:603079). It is used when the opening width of the standard TOPMAX Lifting Fork (code:603074) is not sufficient to access floor tables from above, for example at double floors.


| Technical data | With |  |
| :---: | :---: | :---: |
|  | Vertical Post | Vertical Post 600 |
| Working Load Limit | 12.50 kN | 12.50 kN |
| Self weight | 9.00 kN | 12.00 kN |
| Total weight | 21.50 kN | 24.50 kN |

### 7.3 TOPMAX Table Lifting System

The TOPMAX Table Lifting System (code:603500) is a crane-free system used to lift the TOPMAX Floor Tables and it can be used to reach working heights of 50.00 m , after which it can also be used as a drive out platform for the TOPMAX Floor Tables.

The TOPMAX Table Lifting System (code:603500) is a modular construction system, which can be adapted quickly and flexibly to the requirements of the building. This system consists of a basic unit (basic frame with drive, control and three-part hoisting cage), single triangle lattice tower elements, pylon ties for the connection to the building, floor gates and connection cables. The TOPMAX Table Lifting System (code:603500) is loaded with the TOPMAX Electric Table Jack Lift (code:603600) or the TOPMAX Positioning Unit.

The system is controlled, depending on the operation mode, from the ground station, the floor gates or the hoisting cage.

When using the TOPMAX Table Lifting System (code:603500) to transport people, the system must be operated from the transport cage.

## WARNING

## Risk of damage, collapse and/or serious injury!

Do not exceed the maximum load-bearing capacity of the TOPMAX Table Lifting System (code:603500).
Maximum load-bearing capacity during transport: $1,685 \mathrm{~kg}$.
Maximum load-bearing capacity during loading/unloading: 2,370 kg.

Do not operate the TOPMAX Table Lifting System (code:603500) with wind speeds above 72 Km/h (8 Bft).

Follow the separate operating instructions and Product Information no. 203 of the TOPMAX Table Lifting System (code:603500).

Detail B


## Notes on structural analysis

## 8 Notes on structural analysis

Unless explicitly stated otherwise, all load specifications in this document are safe working loads. This means that characteristic loads can be used for calculations. The following safety factors are included in the safe working load (where applicable):

## Load:

$\gamma_{f}=1.5$
According to DIN EN 1991-1-1 / DIN EN 1991-1-1

## Resistances:

Steel: $\gamma_{\mathrm{m}}=1.1$
Imperfections, load assumptions and additional rules:
According to DIN EN 1993 / DIN EN 12810 / DIN EN 12811/ DIN EN 12812 / DIN EN 1991

## Aluminum:

$\gamma_{\mathrm{m}}=1.1$
Imperfections, load assumptions and additional rules:
According to DIN EN 1999 / DIN EN 12810 / DIN EN 12811 / DIN EN 12812 / DIN EN 1991

## Timber:

$\gamma_{m}=1.3$
$K_{\text {mod }}=0.9$
Imperfections, load assumptions and additional rules:
According to DIN EN 1995 / DIN EN 12810 / DIN EN 12811 / DIN EN 12812 / DIN EN 1991

## Concrete:

$\gamma_{m}=1.5$
Imperfections, load assumptions and additional rules:
According to DIN EN 1992 / DIN EN 12810 / DIN EN 12811 / DIN EN 12812 / DIN EN 1991

## Concrete steel:

$\gamma_{m}=1.15$
Imperfections, load assumptions and additional rules:
According to DIN EN 1992 / DIN EN 12810 / DIN EN 12811 / DIN EN 12812 / DIN EN 1991
These values only include those loads that derive from the respective part itself (unless stated otherwise).

An increase of the loads due to effects in the full system (e.g. theory II, substitute horizontal loads, scaffolding class...) have to be considered.

## 9 Chronology

| Changes since edition 2022-01 | Page | Date |
| :--- | :--- | :--- |
| PROTECTO Post 130 Adjustable added | -- | $2022-09$ |
| PROTECTO Panel G2 added | --- | $2022-09$ |

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## Last modified September 2022 Keep for later use！


[^0]:    Loads shown above to be used in conjunction with tables on pages 32-34.

