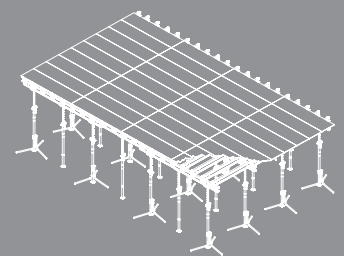
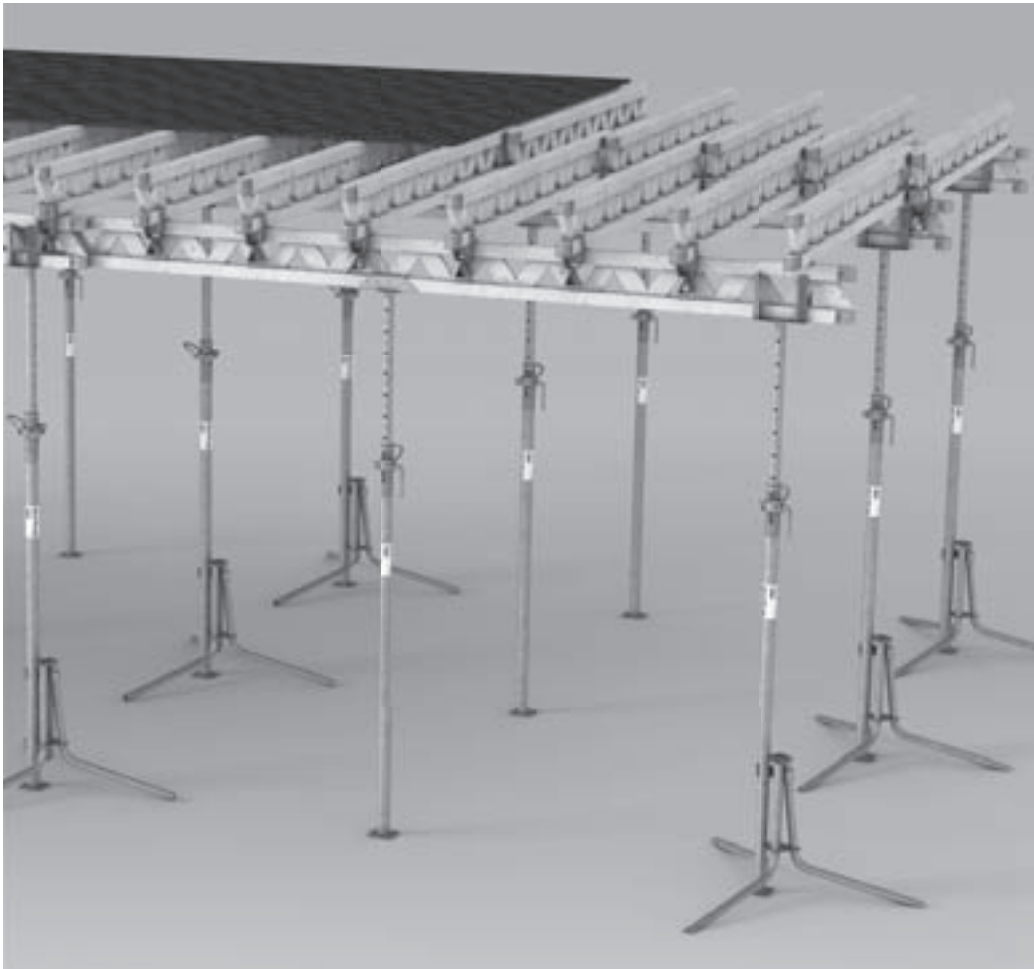


MULTIFLEX

Girder Slab Formwork

Instructions for Assembly and Use – Standard Configuration – Issue 11/2017



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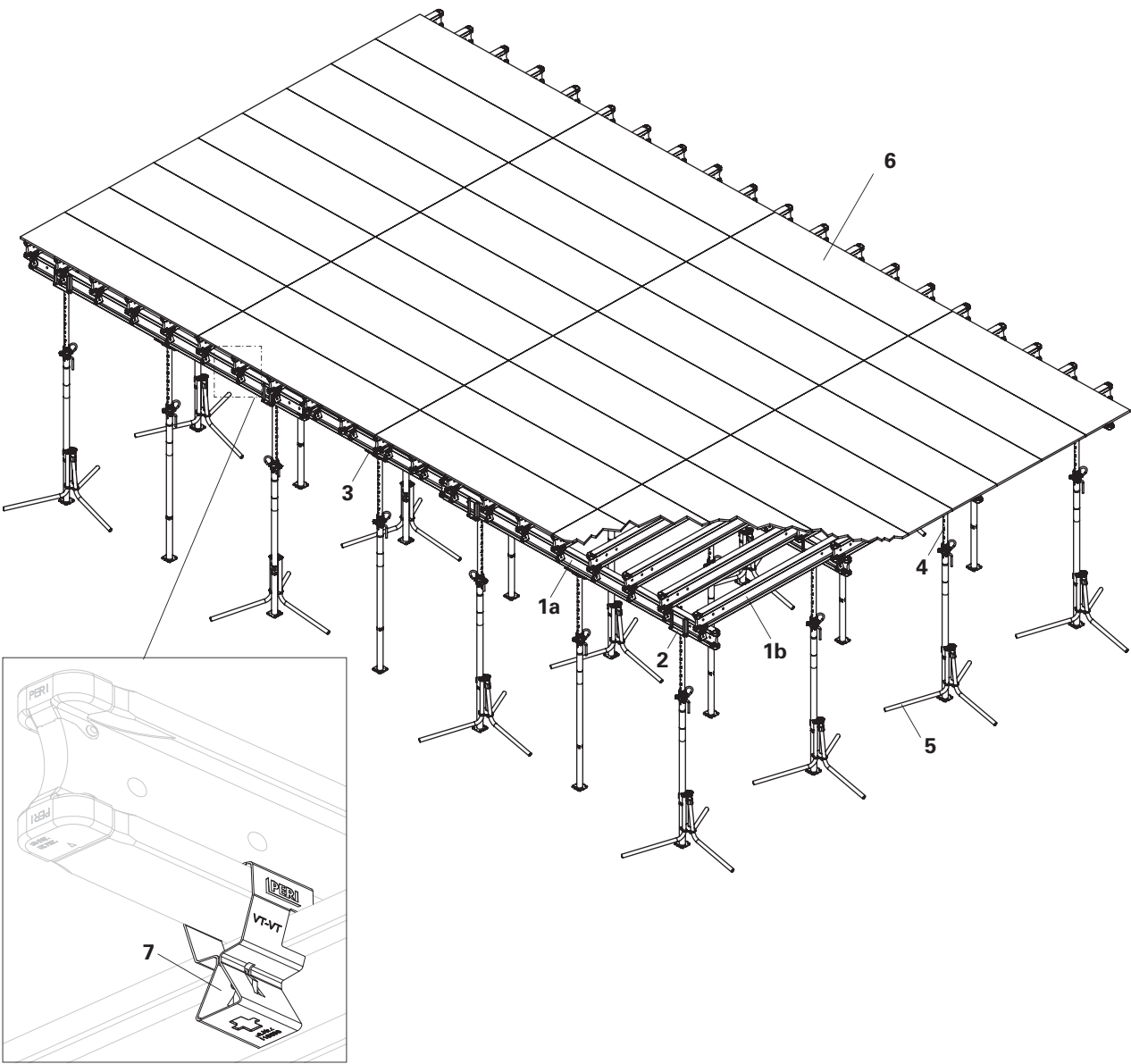
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------------	----

Main components



- | | | | |
|----|------------|---|--------------------|
| 1a | Main Beam | 4 | Prop |
| 1b | Cross Beam | 5 | Tripod |
| 2 | Crosshead | 6 | Plywood formlining |
| 3 | Clawhead | 7 | Flexclip |

Key

Pictogram | Definition



Danger / Warning / Caution



Note



To be complied with



Visual check



Tip



Misapplication



Correct application



Load-bearing point



Safety helmet



Safety shoes



Safety gloves



Safety glasses



Personal protective equipment to prevent falling from a height (PPE)

Arrows in the illustrations



Arrow representing an action



Arrow representing a reaction of an action*



Forces

* If not identical to the action arrow.

Safety instructions – categories

The safety instructions alert site personnel to the risks involved and provide information on how to avoid these risks. Safety instructions are featured at the beginning of the section or ahead of the instructions, and are highlighted as follows:



DANGER

This sign indicates an extremely hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

This sign indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

This sign indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



NOTE

This sign indicates warning of situations whereby failure to observe the information can result in material damage.

Setup of the safety instructions



SIGNAL WORD

Type and source of the danger!
Consequences of non-compliance.
⇒ Avoidance measures.

Dimension specifications

Dimensions are usually given in cm. Other measurement units, e.g. m, are shown in the illustrations.

Conventions

- Instructions are numbered with:
1., 2., 3.
- The result of an instruction is shown by: →
- Position numbers are clearly provided for the individual components and are given in the drawing, e.g. **1**, in the text in brackets, for example (1). Multiple position numbers, i.e. alternative components, are represented with a slash: e.g. **1/2**.

Units shown in the illustrations

Dimensions featured in the illustrations are in cm but without units. Deviating units are additionally given, e.g. in m. Exception:

In the Components section, measurements are always given in mm.

Load details featured in the illustrations are in kg, but without units. Deviating units are additionally given, e.g. in t.

Presentational reference

The illustration on the front cover of these instructions is understood to be a system representation only. The assembly steps presented in these Instructions for Assembly and Use are shown in the form of examples with only one component size. They are valid accordingly for all component sizes contained in the standard configuration.

For a better understanding, detailed illustrations are partly incomplete. The safety installations which have possibly not been included in these detailed drawings must nevertheless still be available.

Target groups

Contractors

These Instructions for Assembly and Use are designed for contractors who use the formwork systems for

- assembling, modifying and dismantling, or use
- them, e.g. for concreting, or
- allow them to be used for other operations, e.g. carpentry or electrical work.

Competent person

(Construction Site Coordinator)

The Safety and Health Protection Coordinator*

- is appointed by the client,
- must identify potential hazards during the planning phase,
- determines measures that provide protection against risks,
- creates a safety and health plan,
- coordinates the protective measures for the contractor and site personnel so that they do not endanger each other,
- monitors compliance with the protective measures.

Competent person qualified to carry out inspections

Due to the specialist knowledge gained from professional training, work experience and recent professional activity, the competent person qualified to carry out inspections has a reliable understanding of safety-related issues and can correctly carry out inspections. Depending on the complexity of the test to be undertaken, e.g. scope of testing, type of testing or the use of a certain measuring device, a range of specialist knowledge is necessary.

Qualified persons

Formwork systems may only be assembled, modified or dismantled by personnel who are suitably qualified to do so. For the work to be carried out, the qualified persons must have received instructions** covering at least the following points:

- Explanation of the plan for the assembly, modification or dismantling of the formwork in an understandable form and language.
- Description of the measures for assembling, modifying or dismantling the formwork.

- Designation of the preventive measures to avoid the risk of persons and objects falling to the ground.
- Designation of the safety precautions in the event of changing weather conditions which could adversely affect the safety of the formwork system as well as the persons concerned.
- Details regarding the permissible loads.
- Description of any other risks that are associated with the assembly, modification or dismantling procedures.



- **In other countries, ensure that the relevant national guidelines and regulations in the respective current version are complied with!**
- **If no country-specific regulations are available, it is recommended to proceed according to German rules and regulations.**
- **A competent person must be present on site during formwork operations.**

* Valid in Germany: Regulations for Occupational Health and Safety on Construction Sites 30 (RAB 30).

** Instructions are given by the contractor himself or a competent person appointed by him.

Additional technical documentation

- Instructions for Assembly and Use:
 - PEP Ergo, PEP
 - MULTIPROP MP
 - MULTIPROP System
 - VARIODECK
- Instructions for Use:
 - Pallets and Stacking Devices
 - Stripping Cart ASW 465
 - Stripping Cart Alu
 - Pallet Lifting Trolley
- Data sheet:
 - GT 24 Girder user information
 - VT 20 Girder user information
 - Anchor Bolt 14/20 x 130
- PERI Design Tables - Formwork and Shoring
- MULTIFLEX Brochure

Intended use

Features

PERI MULTIFLEX is a flexible girder slab formwork system for slab thicknesses up to 1.00 m.

The formwork consists of main and cross beams, plywood formlining along with crossheads and clawheads. The following main beam / cross beam combinations are possible:

VT 20 / VT 20,

GT 24 / VT 20,

GT 24 / GT 24.

Users may select the type of plywood formlining required.

Technical data

GT 24 as main and cross beam

Slab thicknesses up to 1.00 m

VT 20 as main and cross beam

(presented in the following)

Slab thickness up to 0.50 m

GT 24 as main beam VT 20 as cross beam

Slab thickness up to 0.50 m

2 x GT 24 as main beam

1 x GT 24 as cross beam

Slab thicknesses up to 1.00 m

2 x VT 20 as main beam

1 x VT 20 as cross beam

Slab thicknesses up to 1.00 m

For permissible slab thicknesses and available prop loads: see PERI Tables.

Instructions on use

The use in a way not intended according to the Instructions for Assembly and Use, or any use deviating from the standard configuration or the intended use represents a misapplication with a potential safety risk, e.g. risk of falling.

Only PERI original parts may be used. The use of other products and spare parts is not allowed.

Changes to PERI components are not permitted.

Cleaning and maintenance instructions

In order to maintain the value and operational readiness of the formwork materials over the long term, clean the panels after each use. Some repair work may also be inevitable due to the tough working conditions. The following points should help to keep cleaning and maintenance costs as low as possible.

Spray the formwork on both sides with concrete release agent before each use; this allows easier and faster cleaning of the formwork. Spray the concrete release agent very thinly and evenly!

Spray the rear side of the formwork with water immediately after concreting; this avoids any time-consuming and costly cleaning operations.

When used continuously, spray the panel formlining with concrete release agent immediately after striking; then clean by means of a scraper, brush or rubber lip scraper. Important: do not clean formlining made of plywood with high-pressure equipment; this could result in the formlining being damaged.

Fix box-outs and mounting parts with double-headed nails; as a result, the nails can easily be removed later, and damage to the formlining is largely avoided.

Close all unused anchor holes with plugs; this eliminates any subsequent cleaning or repair work. Anchor holes accidentally blocked with concrete are freed by means of a steel pin from the formlining side.

When placing bundles of reinforcement bars or other heavy objects on horizontally-stored formwork elements, suitable support, e.g. square timbers, is to be used; as a result, impressions and damage to the formlining are largely avoided.

Internal concrete vibrators should be fitted with rubber caps if possible; as a result, any damage to the formlining is reduced if the vibrator is accidentally "inserted" between the reinforcement and formlining.

Never clean powder-coated components, e.g. elements and accessories, with a steel brush or hard metal scraper; this ensures that the powder-coating remains intact.

Use spacers for reinforcement with large-sized supports or extensive areas of support; this largely avoids impressions being formed in the formlining when under load.

Mechanical components, e.g. spindles or gear mechanisms, must be cleaned of dirt or concrete residue before and after use, and then greased with a suitable lubricant.

Provide suitable support for the components during cleaning so that no unintentional change in their position is possible.

Do not clean components suspended on a crane.

Cross-system

General

The contractor must ensure that the Instructions for Assembly and Use supplied by PERI are available at all times and fully understood by the site personnel.

These Instructions for Assembly and Use can be used as the basis for creating a risk assessment. The risk assessment is compiled by the contractor. These Instructions for Assembly and Use do not replace the risk assessment!

Always take into consideration and comply with the safety instructions and permissible loads.

For the application and inspection of PERI products, the current safety regulations and guidelines valid in the respective countries must be observed.

Materials and working areas are to be inspected on a regular basis, especially before each use and assembly, for:

- signs of damage,
- stability and
- function.

Damaged components must be exchanged immediately on site and may no longer be used.

Safety components are to be removed only when they are no longer required.

Components provided by the contractor must conform with the characteristics required in these Instructions for Assembly and Use as well as all valid construction guidelines and standards. Unless otherwise indicated, this applies in particular to:

- Timber components: Strength Class C24 for Solid Wood according to EN 338.
- Scaffold tubes: galvanised steel tubes with minimum dimensions of $\varnothing 48.3 \times 3.2$ mm according to EN 12811-1:2003 4.2.1.2.
- Scaffold tube couplings according to EN 74.

Deviations from the standard configuration are only permitted after a further risk assessment has been carried out by the contractor.

On the basis of this risk assessment, appropriate measures for working and operational safety as well as stability are to be determined.

Corresponding proof of stability can be provided by PERI on request if the risk assessment and resulting measures to be implemented are made available.

Before and after exceptional occurrences that may have an adverse effect regarding the safety of the formwork system, the contractor must immediately

- create another risk assessment, with appropriate measures for ensuring the stability of the formwork system being carried out based on the results,
- arrange for an extraordinary inspection to be carried out by competent person qualified to do so. The aim of this inspection is to identify and rectify any damage in good time in order to guarantee the safe use of the formwork system.

Exceptional occurrences can include:

- accidents,
- longer periods of non-use,
- natural events, e.g. heavy rainfall, icing, heavy snowfall, storms or earthquakes.

Assembly, modification and dismantling work

Assembly, modification or dismantling of formwork systems may only be carried out by qualified persons under the supervision of a competent person. The qualified persons must have received appropriate training for the work to be carried out with regard to specific risks and dangers.

On the basis of the risk assessment and Instructions for Assembly and Use, the contractor must create installation instructions in order to ensure safe assembly, modification and dismantling of the formwork system.

The contractor must ensure that the personal protective equipment required for the assembly, modification or dismantling of the formwork system, e.g.

- safety helmet,
- safety shoes,
- safety gloves,
- safety glasses,

is available and used as intended.

If personal protective equipment against falling (PPE) is required or specified in local regulations, the contractor must determine appropriate attachment points on the basis of the risk assessment.

The personal protective equipment against falling to be used is determined by the contractor.

The contractor must

- provide safe working areas for site personnel which are to be reached through the provision of safe access ways. Areas of risk must be cordoned off and clearly marked.
- ensure the stability during all stages of construction, in particular during assembly, modification and dismantling operations.
- ensure and prove that all loads can be safely transferred.

Utilization

Every contractor who uses or allows formwork systems or sections of the formwork to be used, has the responsibility for ensuring that the equipment is in good condition.

If the formwork system is used successively or at the same time by several contractors, the health and safety coordinator must point out any possible mutual hazards and all work must be then coordinated.

System-specific

Retract components only when the concrete has sufficiently hardened and the person in charge has given the go-ahead for striking to take place.

Anchoring is to take place only if the anchorage has sufficient concrete strength.

The load-distributing support used, such as planking, must match the respective base. If several layers are required, planks are to be arranged cross-wise.

During striking, do not tear off the formwork elements with the crane.

The existing prop loads (see Tables) must be safely transferred by means of sufficiently load-bearing slab props or shoring systems.

When storing heavy items on the formwork, the load-bearing capacity must be taken into consideration.

Cantilevers may only be accessed after bracing has been mounted.

The horizontal fixed position of the slab formwork must be guaranteed. This is given with circumferential walls and pre-concreted beams. Otherwise, the transfer of the horizontal loads has to be guaranteed by means of other measures supplied by the contractor, e.g. bracing. Load assumptions for horizontal loads in accordance with DIN EN 12812.

In order to avoid an overloading of the integrated temporary props, the load-bearing capacity of the slabs, plates and beams which have already been completed must be activated. For this, a free deflection possibility of these components is required. This takes place by releasing and re-installing all existing temporary props, and is also required for formwork systems where the prop head is an integral part of the slab formwork.

For supporting pre-cast slabs, details provided by the manufacturer are also to be taken into consideration.

For unfavourable structure geometries or larger wind speeds, additional securing measures are to be implemented, e.g.:

- ballast,
- bracing,
- dismantling the formwork etc.

Storage and transportation

Store and transport components ensuring that no unintentional change in their position is possible. Detach lifting accessories and slings from the lowered components only if they are in a stable position and no unintentional change is possible.

Do not drop the components.

Use PERI lifting accessories and slings as well as only those load-bearing points provided on the component.

During the moving procedure

- ensure that components are picked up and set down so that unintentional falling over, falling apart, sliding, falling down or rolling is avoided.
- no persons are allowed to remain under the suspended load.

The access areas on the jobsite must be free of obstacles and tripping hazards as well as being slip-resistant.

For transportation, the surface used must have sufficient load-bearing capacity.

Use original PERI storage and transport systems, e.g. crate pallets, pallets or stacking devices.

! NOTE

Incorrectly stored or transported components can get damaged.

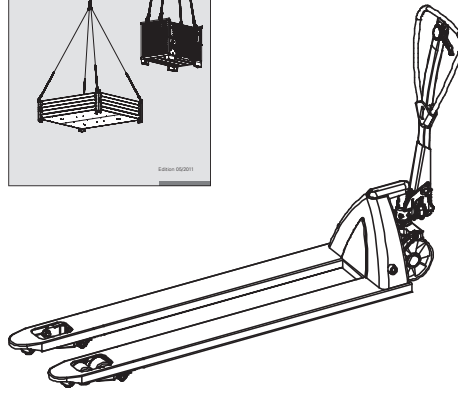
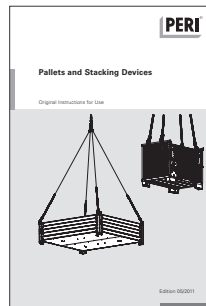
Damaged components are no longer safe and may no longer be used.

⇒ Instructions for Use for PERI Pallets and Stacking Devices must be followed at all times!

⇒ Manually-created transport units must be correctly stacked and secured!

⇒ Pallets and stacked items are to be protected against the effects of the weather, e.g. elements secured against lifting by means of tension belts!

⇒ Always attach the 4-sling lifting gear using the four load-bearing points.



Transport of loads

PERI pallets and stacking devices are suitable for lifting by crane or forklift. They can also be moved with the PERI Pallet Lifting Trolley.

- Always attach the 4-sling lifting gear using the four load-bearing points.
- Only move one pallet at any one time with the crane.

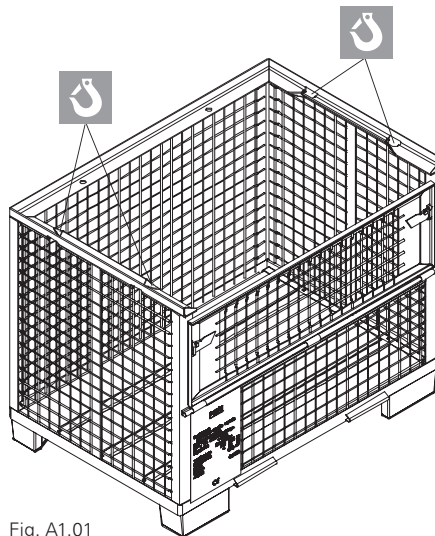


Fig. A1.01



Lashing straps are manufactured according to DIN EN 12195-2, and are to be regularly checked in accordance with this standard.

The illustrations show examples. (Fig. A1.01 - A1.02a)

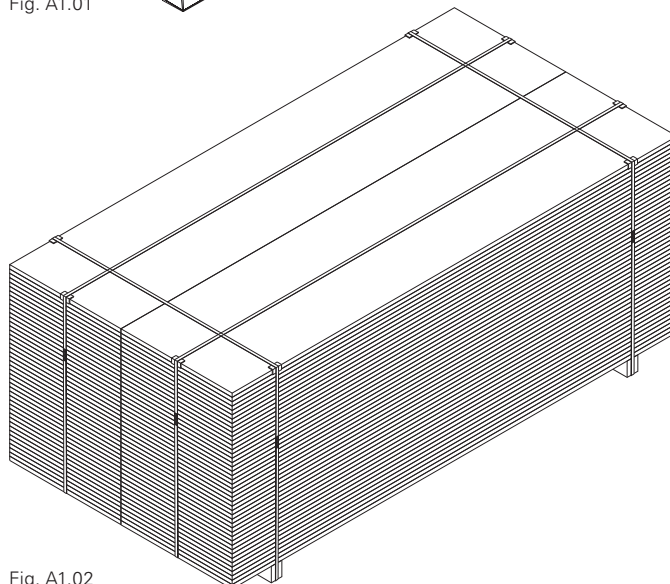


Fig. A1.02

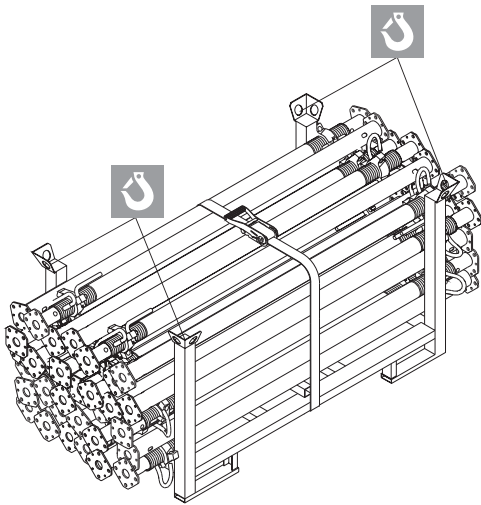


Fig. A1.02a

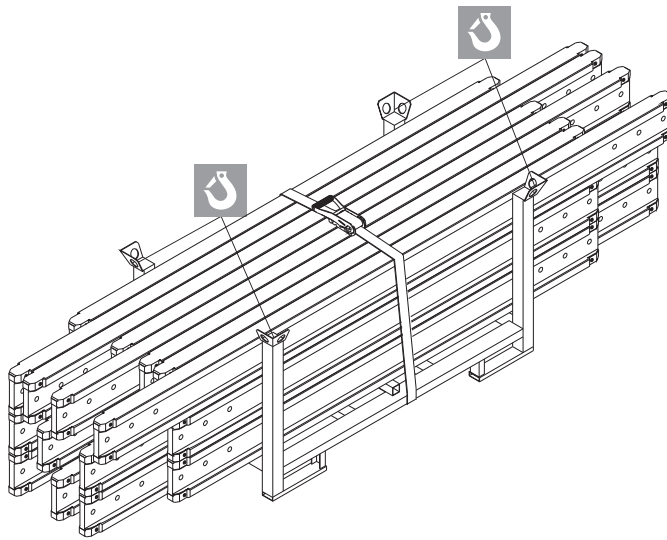


Fig. A1.02b

A2 System components

Plywood formlining

For other formlining possibilities: see PERI Components.

In the PERI Design Tables, the 3-Ply Plywood (21 mm) has been taken into consideration. (Fig. A2.01)

The use of other plywood formlining must be statically checked.

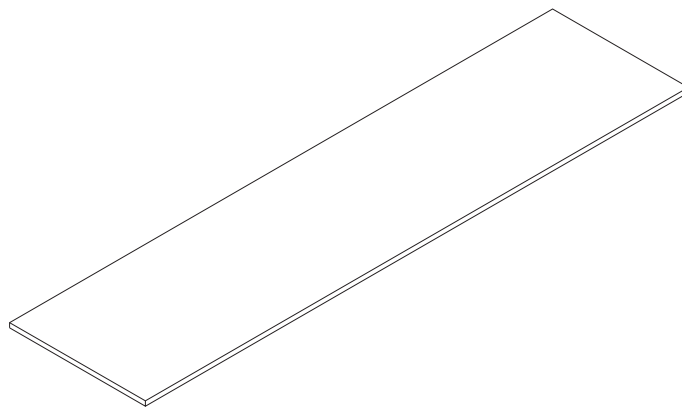


Fig. A2.01

GT 24 Girder

Permissible internal forces and bearing forces

Permissible shear force

Permissible bearing force in the nodes (+/- 2 cm)

Permissible bearing force between the nodes

Permissible bending moment

Permissible support moment (for support directly under the nodes)

Permissible support moment (support between the nodes)

perm. Q = 13.0 kN

perm. A_n = 28.0 kN

perm. A_m = 20.0 kN

perm. M = 7.0 kNm

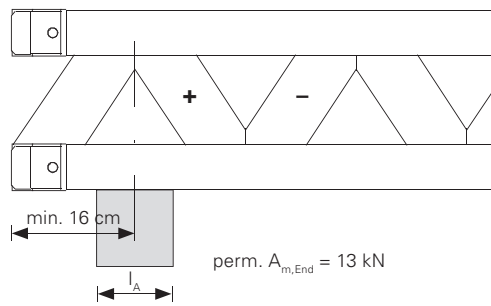
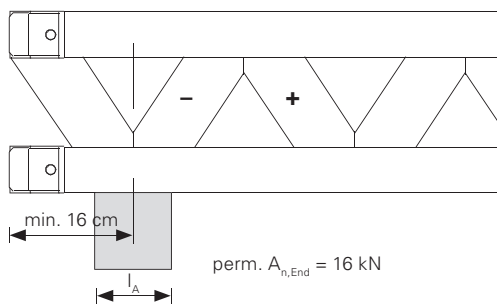
perm. M_n = 7.0 kNm

perm. M_m = 4.0 kNm

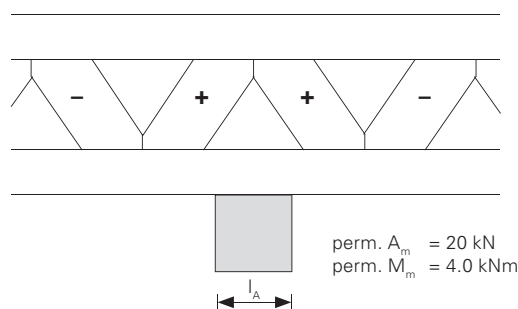
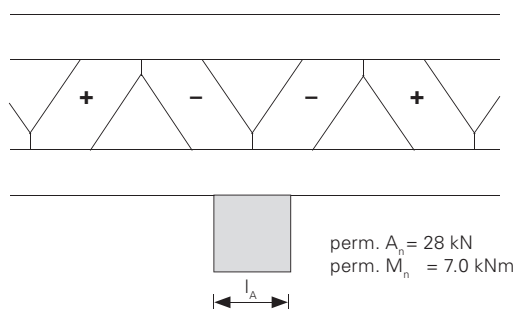
Flexural rigidity

EI = EI = 887 kNm²

End supports for single spans and continuous girders



Supports for continuous and cantilevered girders



For carrying the maximum bearing force into the GT 24 Girder, the support lengths l_A must have the following minimum dimensions:

13.5 cm for support directly under the nodes,
14.5 cm for support between the nodes.

GT 24 Girder

Bearing pressure:

Bearing force perm. $A = b \times L_{eff} \times k_c \times \text{perm. } \sigma_{D\perp}$

b = support width

L_{eff} = effective support length

$$= L_A + 2 \times 3 \text{ cm, but} \\ \leq 2 \times L_A$$

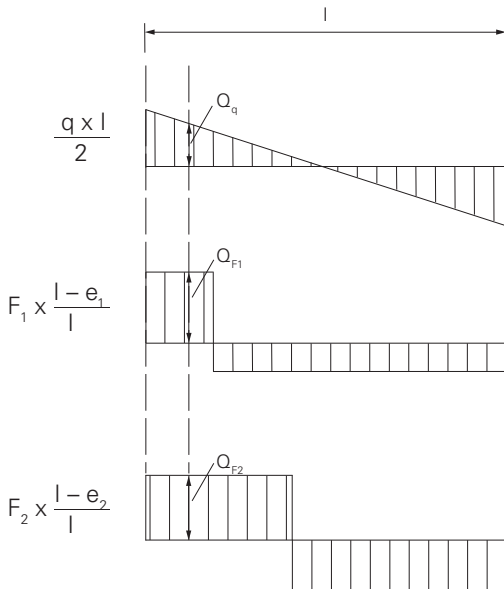
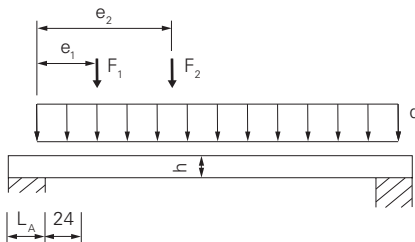
Design-typical lateral pressure coefficient for

support directly under the nodes $k_{c,90,n} = 1.45$

support between the nodes $k_{c,90,m} = 1.0$

bearing pressure perm. $\sigma_{D\perp} = 1.24 \text{ N/mm}^2$

Specified shear forces



For the design, the shear forces (external loads) may be reduced as follows:

$$Q_{q,red} = \frac{q \times l}{2} \times \left(1 - \frac{L_A}{l} - \frac{48 \text{ cm}}{l}\right)$$

$$e_1 < 60 \text{ cm: } Q_{F1,red} = F_1 \times \frac{l - e_1}{l} \times \frac{e_1}{60 \text{ cm}}$$

$$e_2 > 60 \text{ cm: } Q_{F2} = F_2 \times \frac{l - e_1}{l}$$

$$Q_{red} = Q_{q,red} + Q_{F1,red} + Q_{F2}$$

$$Q_{red} \leq \text{perm. } Q = 13 \text{ kN}$$

In addition, the shear force $Q = Q_q + Q_{F1} + Q_{F2}$ must be verified directly over the support

$$Q \leq \text{perm. } Q_n = 16 \text{ kN}$$

The following applies for cantilever beams:

$$l = 2 \times l_k$$

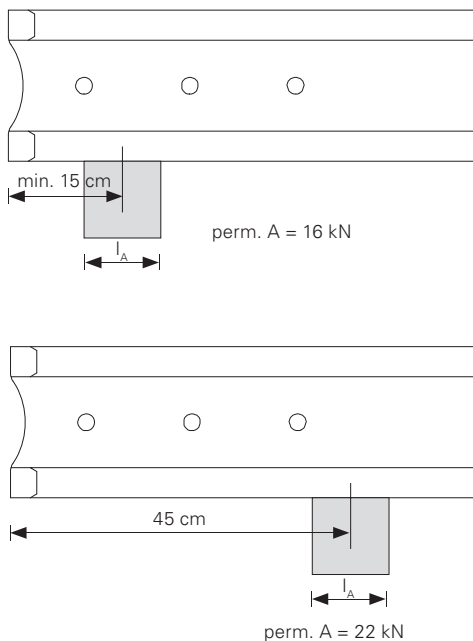
VT 20 Girder

Permissible internal forces and reaction forces:

Permissible shear force	perm. Q = 11.0 kN
Permissible reaction force	perm. A = 22.0 kN
Permissible bending moment	perm. M = 5.0 kNm

Bending rigidity EI = 460 kNm²

End supports for single spans and continuous girders



The projecting length of the girder must be at least 15 cm.

Depending on the projecting length of the girder between the two values A = 16 kN and max. perm. A = 22 kN, the permissible bearing load can be linearly interpolated.

For transferring the maximum reaction force into the VT 20 girder, the support length l_A must be at least 13.5 cm.

Bearing pressure:

Reaction force perm. $A = b \times L_{\text{eff}} \times k_c \times \text{perm. } \sigma_{\perp}$

b = support width

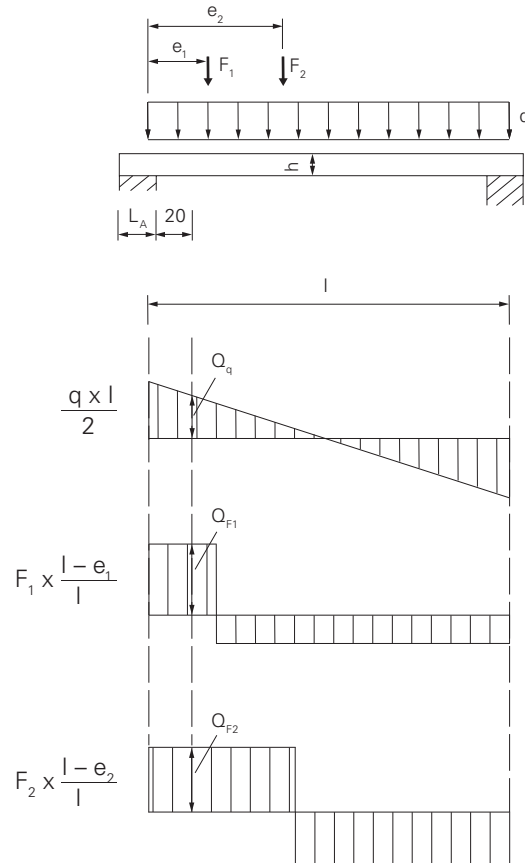
L_{eff} = effective support length

= $L_A + 2 \times 3 \text{ cm}$, but $\leq 2 \times L_A$

Design-typical lateral pressure coefficient with $k_{c,90,n} = 1.15$

Bearing pressure perm. $\sigma_{\perp} = 1.24 \text{ N/mm}^2$

Specified shear forces



For the design, the shear forces (external loads) may be reduced as follows:

$$Q_{q,\text{red}} = \frac{q \times l}{2} \times \left(1 - \frac{L_A}{l} - \frac{40 \text{ cm}}{l}\right)$$

$$e_1 < 50 \text{ cm: } Q_{F1,\text{red}} = F_1 \times \frac{l - e_1}{l} \times \frac{e_1}{50 \text{ cm}}$$

$$e_2 > 50 \text{ cm: } Q_{F2} = F_2 \times \frac{l - e_1}{l}$$

$$Q_{\text{red}} = Q_{q,\text{red}} + Q_{F1,\text{red}} + Q_{F2}$$

$$Q_{\text{red}} \leq \text{perm. } Q = 11 \text{ kN}$$

In addition, the shear force

$$Q = Q_q + Q_{F1} + Q_{F2}$$

must be verified directly over the support

$$Q \leq \text{perm. } Q_n = 16 \text{ kN}$$

The following applies for cantilever beams:

$$l = 2 \times l_k$$

Slab props



DANGER

Too much load on the MULTIFLEX Slab Formwork!

Danger to life due to collapsing of the slab formwork and concrete slab!

⇒ Loads from the MULTIFLEX Slab Formwork must be safely transferred into the ground.

⇒ Do not exceed the permissible load-bearing capacities!

PERI shoring

- Steel Tube Props PEP (4a).
- Aluminium Props MULTIPROP MP (4b).
- Shoring Towers of the MULTIPROP System, PERI UP Flex, PD 8, ST 100 (not shown).

See corresponding Instructions for Assembly and Use.

2. Depending on the available head versions, select the following:

- For heads with a self-locking coupling, engage the self-locking coupling and check functionality.
- For heads without a self-locking coupling, secure by means of bolts and cotter pins.

3. Position prop.

(Fig. A2.03)

Release:

Release the self-locking coupling or loosen bolt and remove head.

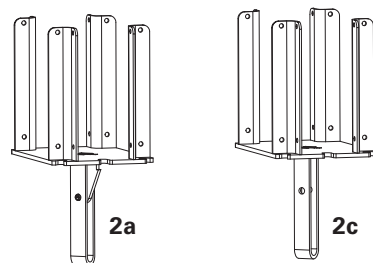


Fig. A2.02a

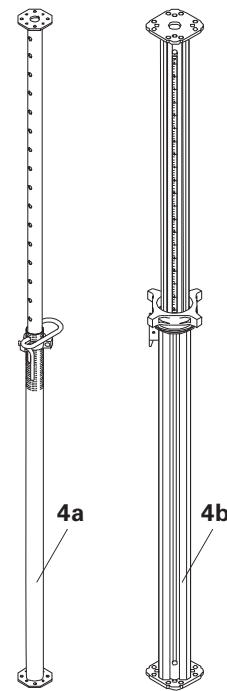


Fig. A2.01

Formwork support

For providing stable support for one or two formwork girders and as intermediate support.

At the end of the girder or at the girder joint.

- Crosshead 20/245 (2a) with self-locking coupling.
- Crosshead 20/24 (2c) with bolts and cotter pins.
- Lowering Head 20/24 (2b) with bolts and cotter pins.

(Fig. A2.02a and Fig. A2.02b)

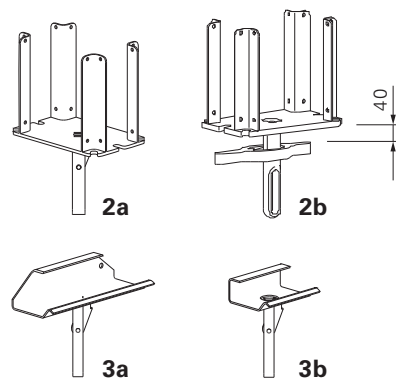


Fig. A2.02b



When marking out the prop, pay attention to the required lowering height (min. 40 mm).

For intermediate support

- Clawhead 245 with self-locking coupling (3a).
- Clawhead 16/205 with self-locking coupling (3b).

(Fig. A2.02b)

Assembly:

1. Place head on the prop.

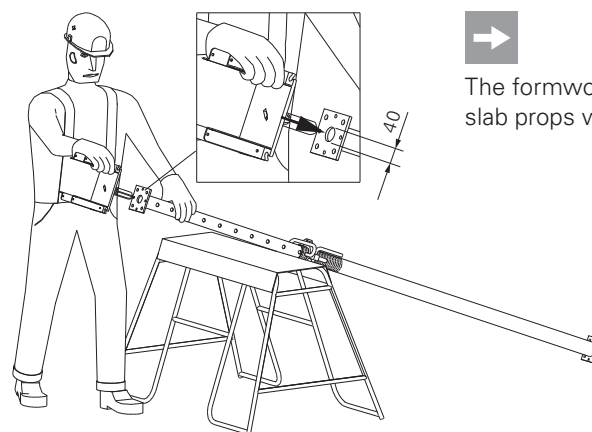


Fig. A2.03



The formwork supports fit all standard slab props with 40 mm hole diameters.

Assembly aids

Universal Tripod

For slab props Ø 57 – □ 120 mm.
(Fig. A2.04a)

Tripod PEP Ergo

For slab props Ø 44 – □ 64 mm.
(Fig. A2.04b)

Due to the swivel foot design, they can also be positioned in corners or against straight walls.

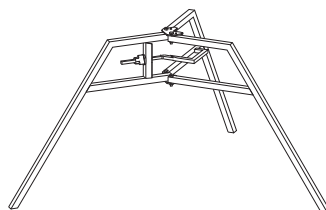


Fig. A2.04a

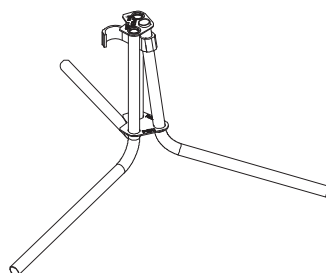
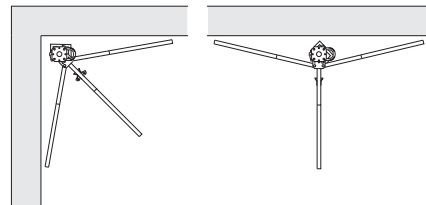


Fig. A2.04b

Brace Clamp

For assembling the diagonal bracing with boards.

- For slab props Ø 48 – 76 mm.
(Fig. A2.05a)
- For slab props Ø 76 – 89 mm, and 100 mm x 100 mm up to 120 mm x 120 mm. (Fig. A2.05b)

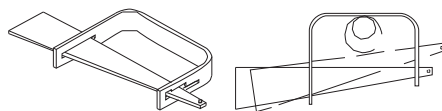


Fig. A2.05a

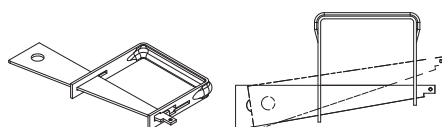


Fig. A2.05b

MULTIPROP Frame MRK

For bracing PERI MULTIPROP Props.
(Fig. A2.06)

PEP Frames PRK

For bracing PERI PEP Props.
(Fig. A2.07)

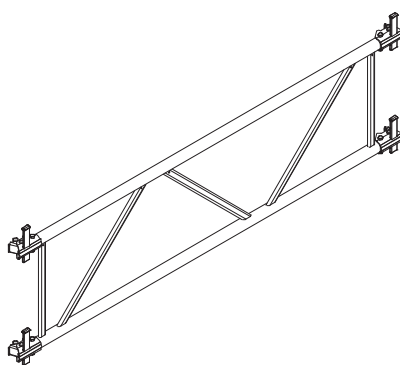


Fig. A2.06

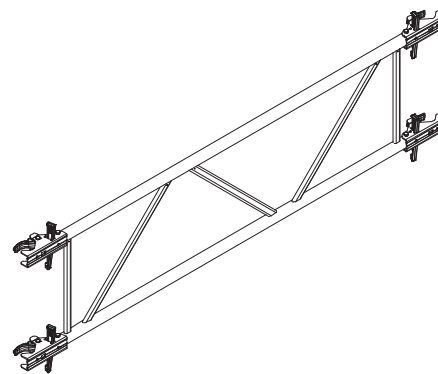


Fig. A2.07

Shuttering aids

Assembly Bar

For installing and dismantling the girders.

For GT 24 and VT 20.

Assembly Bar GT / VT. (Fig. A2.08)

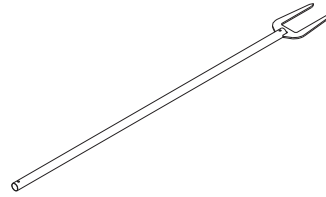


Fig. A2.08

For GT 24 Girders.

Assembly Bar 24. (Fig. A2.09)

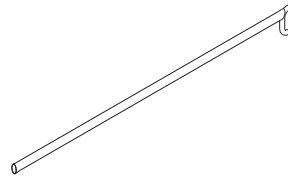


Fig. A2.09

Distance Device MF-Plus

For fitting and aligning formwork girders for the MULTIFLEX System as well as assembling the Flexclips, see A4. (Fig. A2.10)

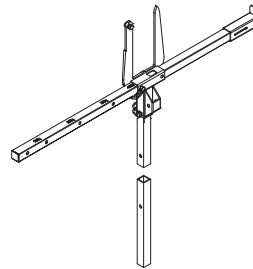


Fig. A2.10

Formwork Carriage.

PERI Stripping Cart ASW 465

(Fig. A2.11) or

Stripping Cart Alu (not shown).

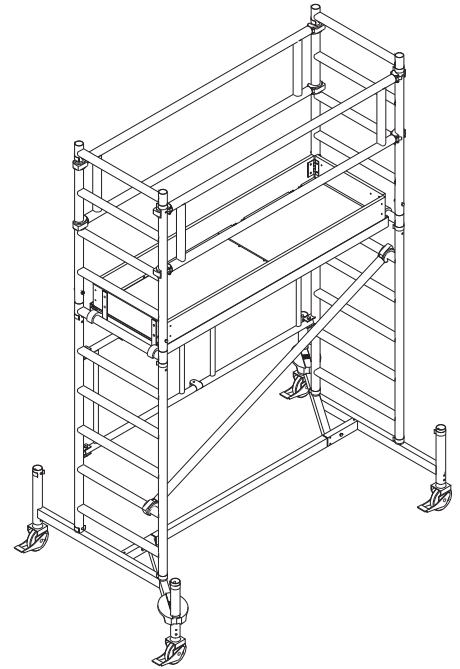
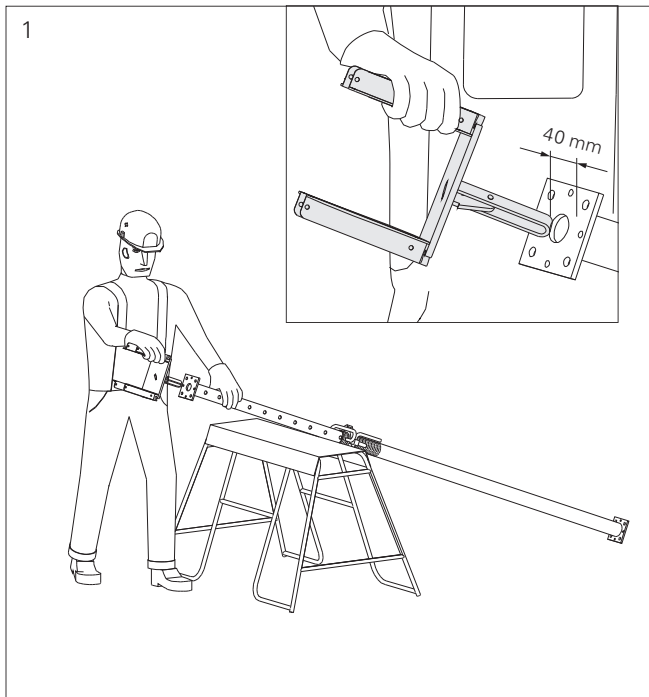


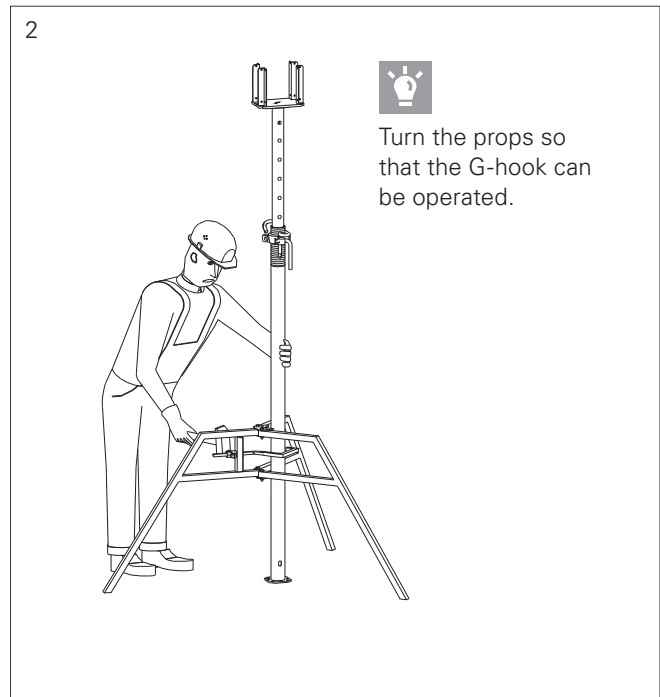
Fig. A2.11



Mount Crosshead or Clawhead on the prop and lock in place (in the case of self-locking coupling).
In all the other cases, secure with bolts and cotter pins.

As alternative to the Crosshead:

Lowering Head 20/24 for easy and simple lowering.

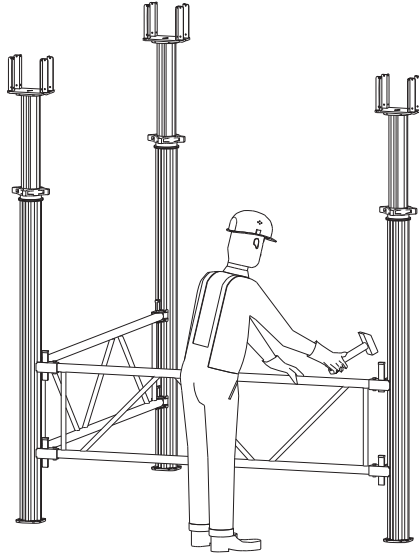


Position Crosshead Props on a flat, clean and sufficiently load-bearing surface. Secure with Tripod (assembly aid).



For inclined use, a separate proof of stability is required!
With tripod:
Horizontal loads from the shuttering procedure can only be transferred for formwork heights up to approx. 3.0 m.

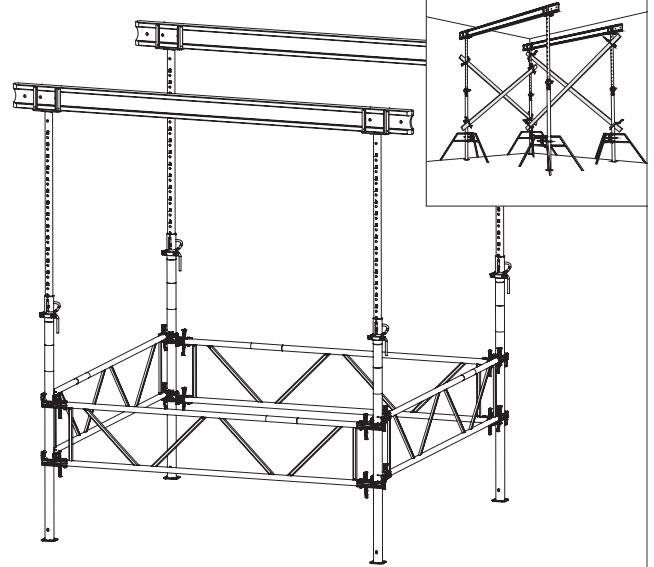
2a



Formwork height > 3.0 m with MULTIPROP Prop

Brace props with Frame MRK as assembly aid. For further details, see type test and MULTIPROP Instructions for Assembly and Use.

2b

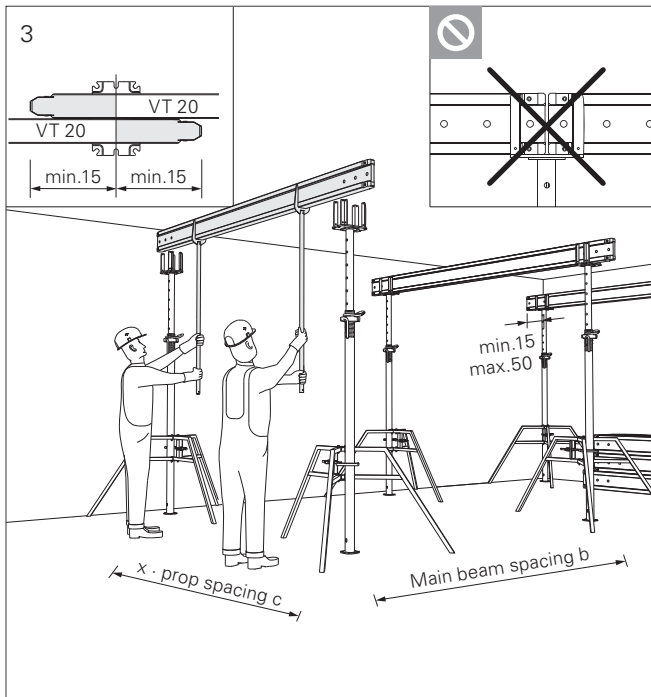


Formwork height > 3.0 m with PEP Steel Tube Prop

Brace props with Frame MRK as assembly aid.

Alternatively:

Mount diagonal bracing as assembly aid with boards and brace clamps.



Level the Crosshead Props. Install main beam from below with the Assembly Bar.

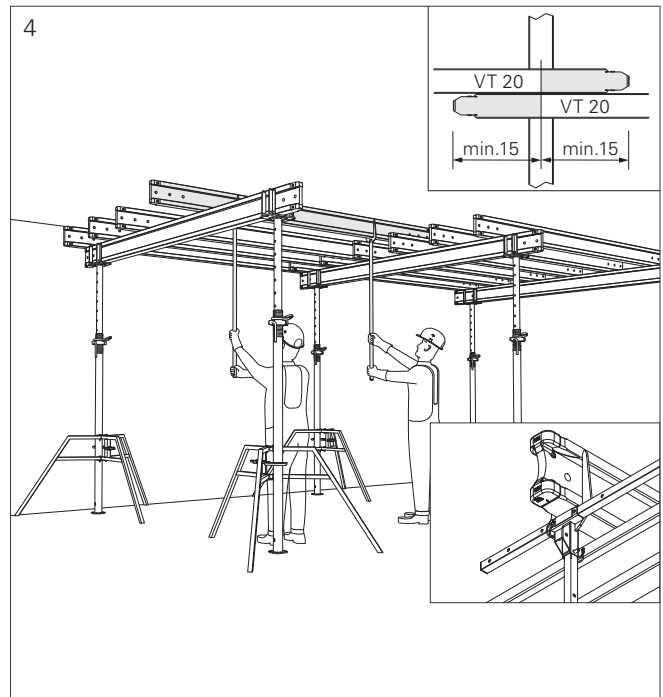
The Crosshead securely supports one or two main beams with no risk of tipping.

Cantilever: VT 20 max. 50 cm
GT 24 max. 45 cm

Do not begin concreting work on the cantilever.



The main beam must be positioned in the Crosshead so that it projects at least 15 cm over the centre of the girder. It must not be joined in the Crosshead on the front sides!



Fit cross beam from below with the Assembly Bar.

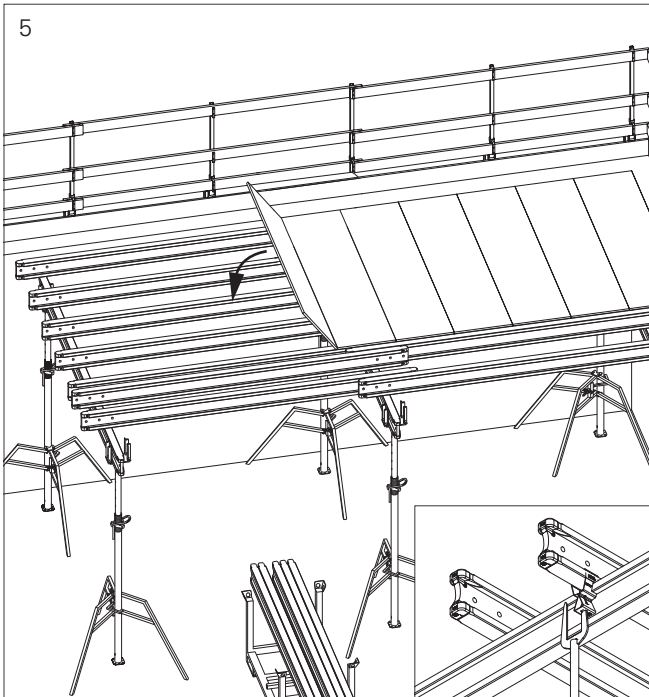
Adjust the cross beam so that plywood formlining joints are always positioned on a cross beam or pair of girders.

Alternatively:

Adjust the cross beam spacing on the Distance Device MF-Plus thus aligning the cross beam. Girder overlap on both sides:

VT 20 min. 15.0 cm

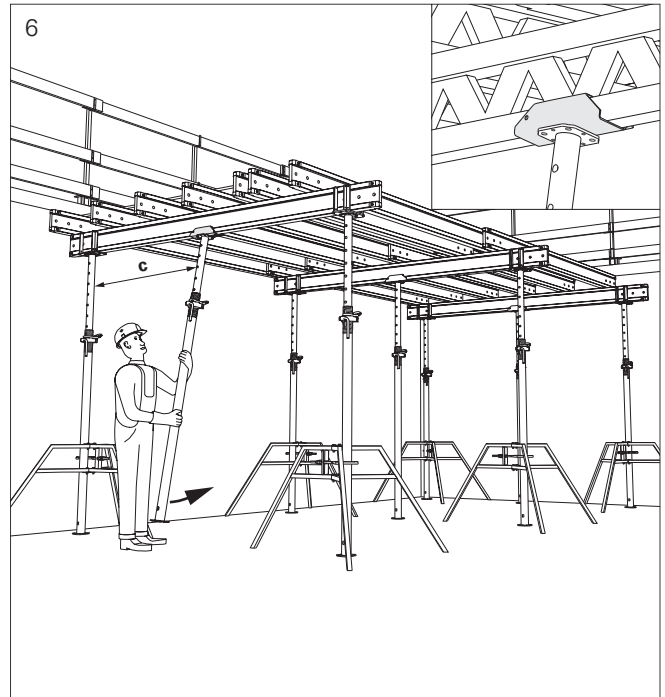
GT 24 min. 16.3 cm



DANGER!

Working areas at large heights!
 Danger to life due to falling!
 ⇒ Mount guardrails before shuttering and according to valid regulations!
 ⇒ Personal protective equipment must be worn!

Secure cross beam against tipping, e.g. with Flexclip MULTIFLEX System.
 Install plywood formlining and secure with nails.
 Level formwork and spray, e.g. with PERI Bio Clean.
 Attention: risk of slipping!



DANGER

Props can tip over if installed incorrectly!
 Danger of life due to overturning of the slab formwork!
 ⇒ Load effects must be safely transferred!

Attach intermediate props with Clawheads in prop spacings c on the beam.
 Adjust lengths of props accordingly.

The MULTIFLEX Slab Formwork can now be loaded. Ensure pallets are available on the assembly area during striking.

Formwork assembly

3 combinations are possible with
GT 24 and VT 20 Girders:

1. VT 20 / VT 20

(Fig. A3.01)

2. VT 20 / GT 24

(Fig. A3.02)

3. GT 24 / GT 24

(Fig. A3.03)

1. VT 20 / VT 20

21 mm plywood
VT 20 Cross Beam
VT 20 Main Beam
h = 42 cm

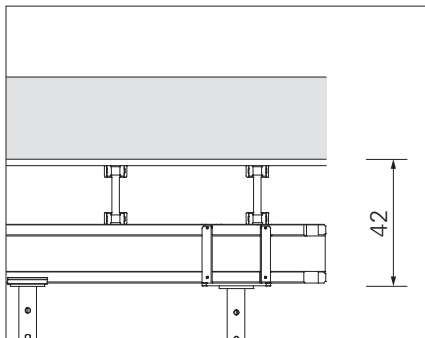


Fig. A3.01

2. VT 20 / GT 24

21 mm plywood
VT 20 Cross Beam
GT 24 Main Beam
h = 46 cm

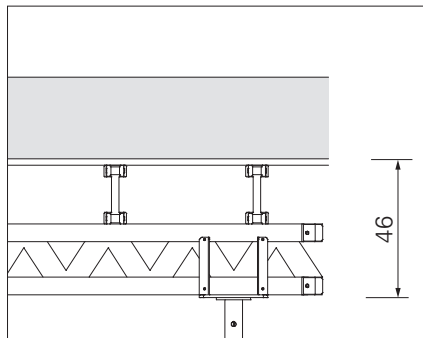


Fig. A3.02

3. GT 24 / GT 24

21 mm plywood
GT 24 Cross Beam
GT 24 Main Beam
h = 50 cm

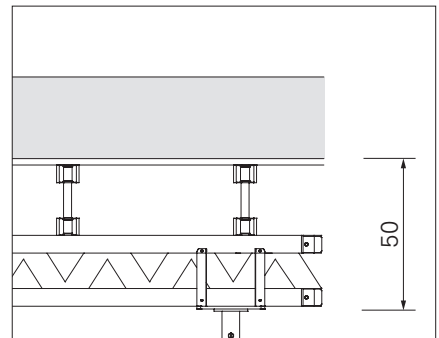


Fig. A3.03

A4 Shuttering the cross beam and securing against tipping

Shuttering the cross beam with the Distance Device MF-Plus

The Distance Device MF-Plus (10) can be adjusted to accommodate different spacings thus eliminating the need to measure the cross beam spacings. In addition, the telescopic tube can be extended in order to shutter the cross beams for higher slabs with personnel positioned on the floor below. (Fig. A4.01)

Pre-adjust the Distance Device MF-Plus to provide the correct spacing:

1. Pull out the tube linch pin (8). (Fig. A4.02)
2. Pull the measuring rod (11) of the Distance Device (10) out of the holder (a). (Fig. A4.03)
3. Insert the measuring rod (11) into the holder (b). When inserting, make sure that the measurements are visible at the top. Adjust the Distance Device to ensure the corresponding cross beam spacing. (Fig. A4.04)
4. Secure using the tube linch pin (8). (Fig. A4.05)

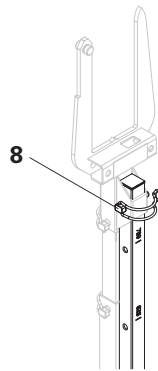


Fig. A4.02

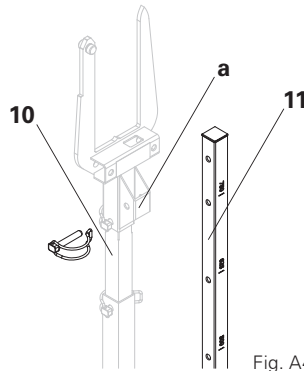


Fig. A4.03

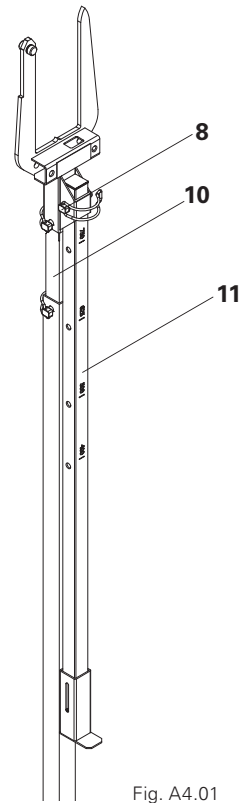


Fig. A4.01

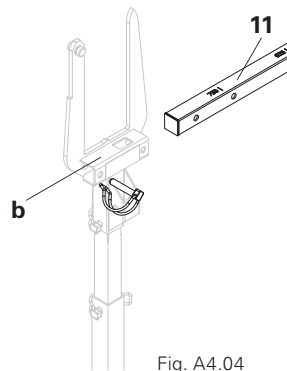


Fig. A4.04

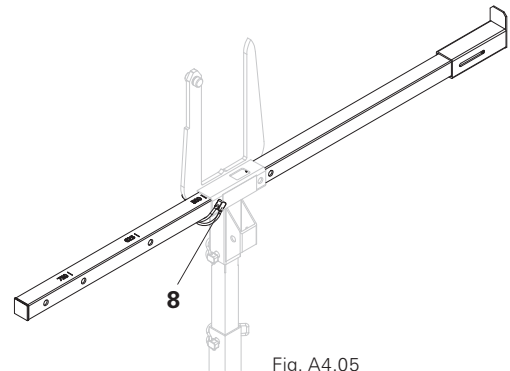


Fig. A4.05

Assembly:

From a safe and secure position below, move the cross beams (1b) to the required spacings using the Distance Device. Move the cross beam (1b) to the left until the Distance Device rests against the cross beam (1b*). As a result, measuring is no longer necessary. (Fig. A4.06)

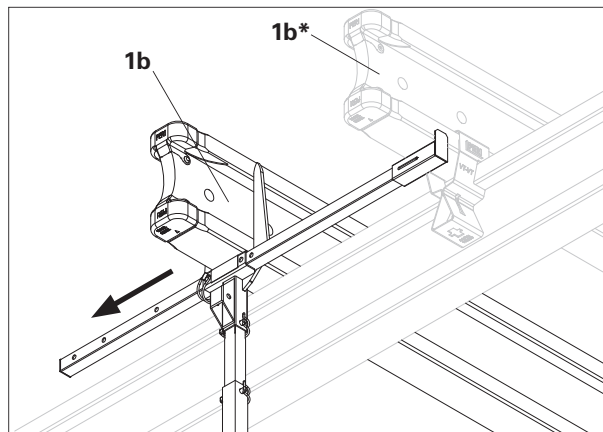


Fig. A4.06

A4 Shuttering the cross beam and securing against tipping



Mounting the Flexclip

For securing the cross beams (1b) against tilting on the main beam (1a). Assembly is safely carried out from the erection level.

Flexclip versions:

- Flexclip VT20 \ VT20 (Fig. A4.07)
- Flexclip GT24 \ GT24 (Fig. A4.07)
- Flexclip GT24 \ VT20 (Fig. A4.07)

FLEXCLIP
VT-VT



FLEXCLIP
GT-GT



FLEXCLIP
GT-VT

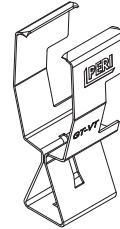


Fig. A4.07



One Flexclip is required per cross beam. The Flexclip is mounted at one of the cross beam and main beam joints

Assembly at low heights:

1. From the end of the girder, push the Flexclip (7) onto the cross beam (1b) (bottom chord) by hand until it rests against the joint.
2. The cross beam is now secure. (Fig. A4.08)

Assembly at greater heights:

1. Force open the Flexclip (7) with the Distance Device MF-Plus (10). (Fig. A4.09)
2. Insert in cross beam (1b) (bottom chord) and pull to cross beam/main beam joint.
3. Pull the Distance Device downwards out of the Flexclip (7).
4. The Flexclip (7) then closes thus securing the cross beam. (Fig. A4.10)

Alternatively:

When mounting the Flexclips, the Fixing Tool MF-Plus (not shown) can also be attached to a wooden butt strap or telescopic tube.

Dismantling:

1. Insert the Distance Device MF-Plus or Fixing Tool MF-Plus into the Flexclip on the girder thus forcing it open.
2. Pull the Flexclip carefully downwards away from the girder.
3. Remove the Flexclip from the Distance Device or Fixing Tool, and store in a pallet.

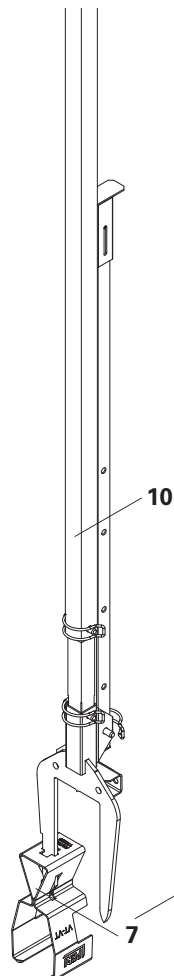


Fig. A4.09

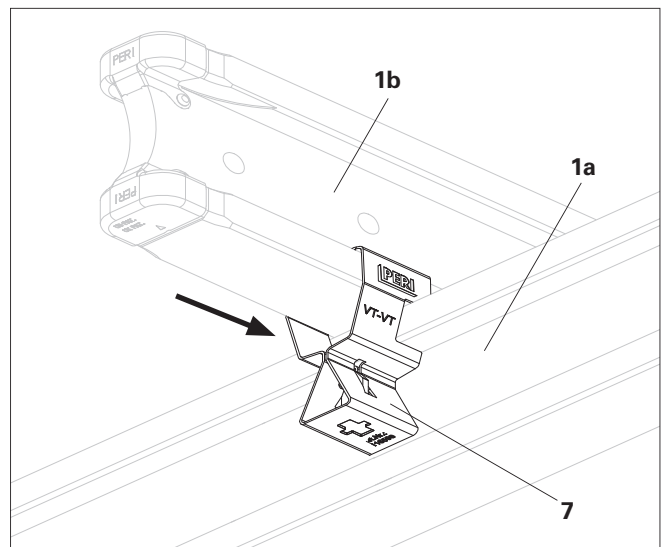


Fig. A4.08

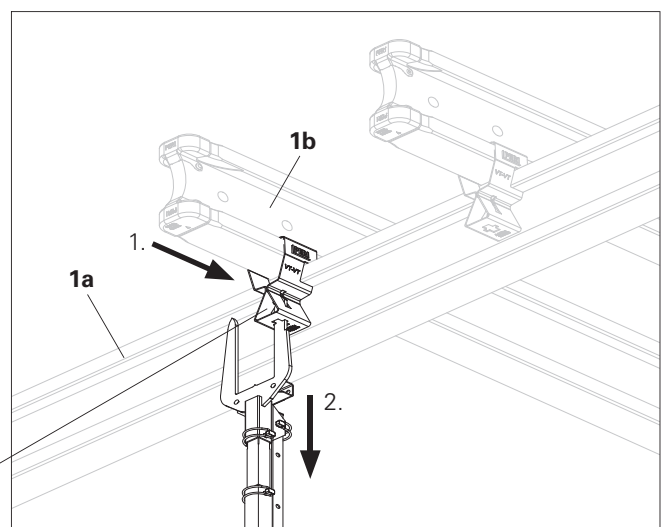


Fig. A4.10

Guardrails at the slab edge with slab tables

The open edge of the building is secured with PERI Slab Tables.
(Fig. A5.01)



DANGER

Bracing not securely mounted!
Danger to life due to risk of falling!
⇒ Transfer horizontal loads from the superstructure into the building.
⇒ This can take place by means of wedging against walls or columns.
⇒ If necessary, bracing is used or other appropriate measures are to be taken.

See, e.g. Instructions for Assembly and Use for PERI VARIODECK.

Guardrails on casting segment with Stopend Angle

Assembly

The Stopend Angle (11) or plastic Stopend Angle can be fixed in the girder longitudinal direction and laterally to the girder.

- 8 wire nails $\varnothing 3.1 \times 65$ (6 pieces at front, 2 pieces at rear, Item no. 018280).
- With clamp for fixing to the girder or timbers.
- Insert Handrail Post AW (12) and nail securely at rear end. (Fig. A5.02)

With conventional stopends.
(Fig. A5.04)

With panel formwork.
(Fig. A5.04a)

With Slab Stopend Bar 105 (13) and Handrail Post HSGP-2 (14).
(Fig. A5.03)

Side protection

Secure guardrail boards with wire nails!

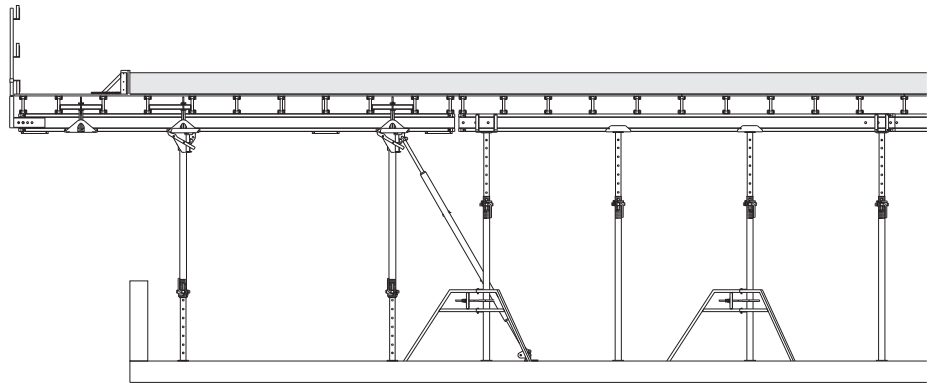


Fig. A5.01

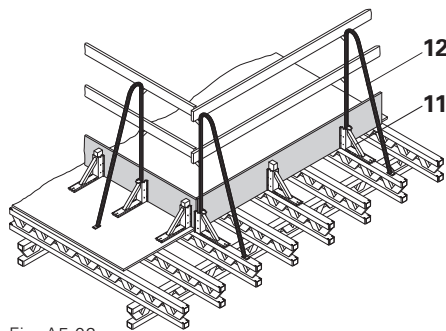


Fig. A5.02

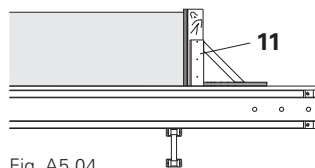


Fig. A5.04

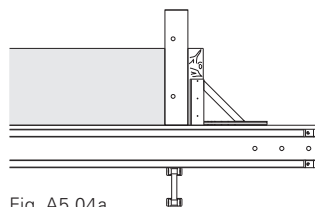


Fig. A5.04a

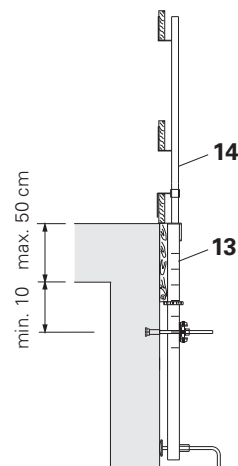


Fig. A5.03

Technical data

Permissible widths of influence: see

PERI Design Tables

- Stopend Angle AW
- Plastic Stopend Angle
- Slab Stopend Bar 105

Guardrails with Guardrail Holder GT 24 / VT 20 and Handrail Post HSGP-2 (e.g. on a casting segment)

Permissible width of influence for
HSGP-2: 2.10 m with guardrail boards.
(Fig. A5.05)

When using VT 20 Formwork Girders,
only use holes 1 – 3 on the handrail
post (16)!

(Fig. A5.05a)

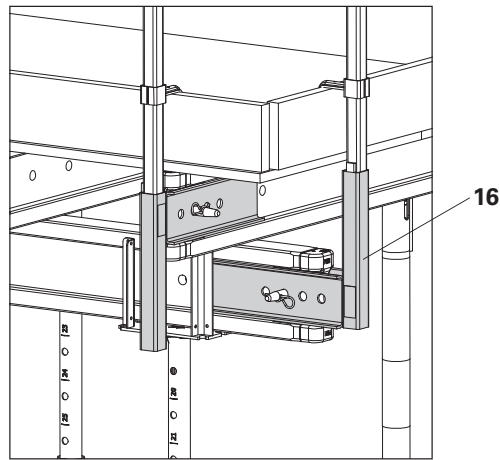


Fig. A5.05

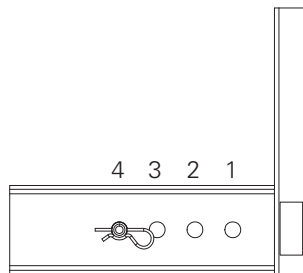
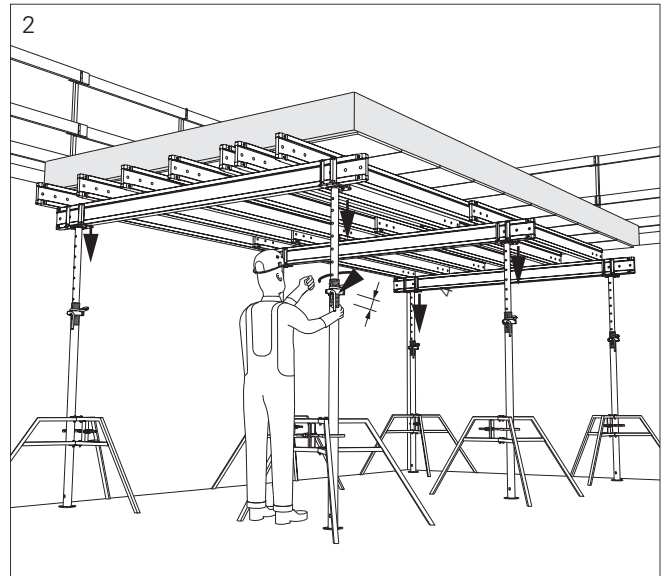
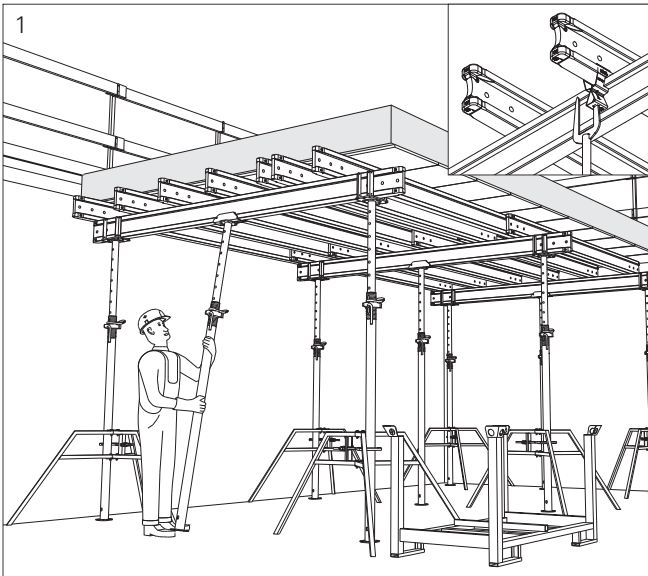


Fig. A5.05a



CAUTION

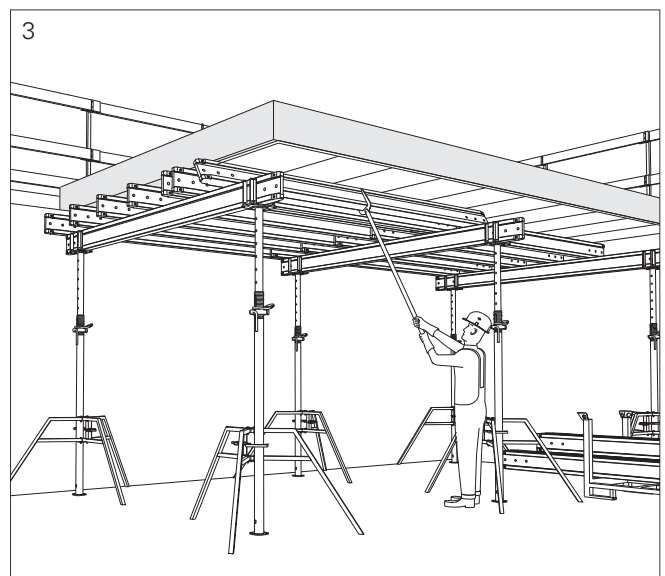
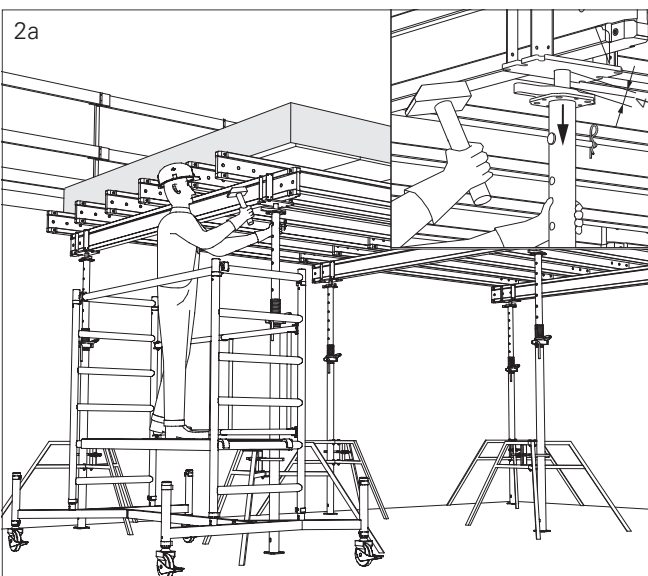
If the curing time is too short, the concrete has not sufficiently hardened!
Danger to life if the concrete slab collapses!
⇒ Curing times must be taken into consideration!

Dismantle intermediate props and store in pallets.
Dismantle Flexclip with the Fixing Tool MF-Plus.
For horizontal transport, the heads stay attached to the props!

Lower all Crosshead Props by approx. 4 cm.



With larger spans, begin lowering and removing props in the slab centre.



Alternative to picture 2

Use hammer blow to lower the Lowering Head = 4 cm.

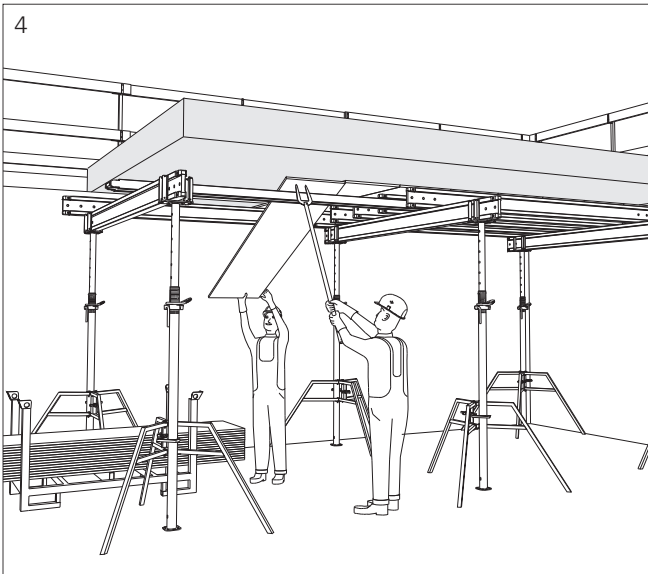


Push back wedge to the original position for the next use and hammer in securely.



Remove cross beam using the Assembly Bar and store in the pallet.

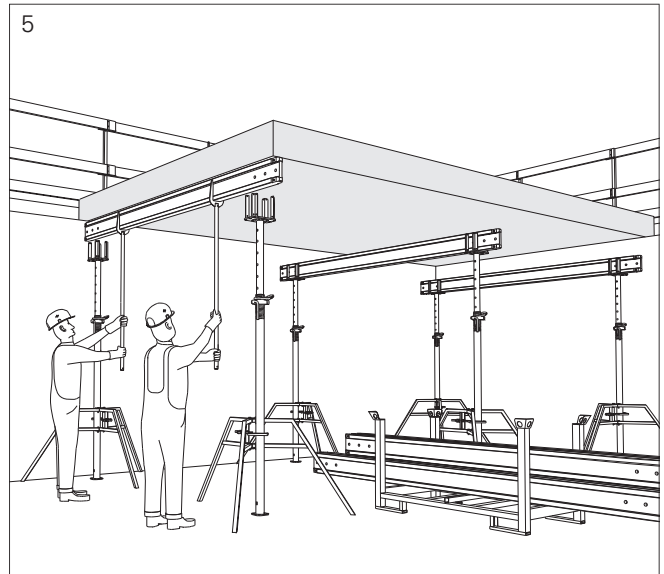
Cross beams placed under the plywood formlining joints remain in position.



Remove plywood formlining and remaining cross beams and store in pallets.

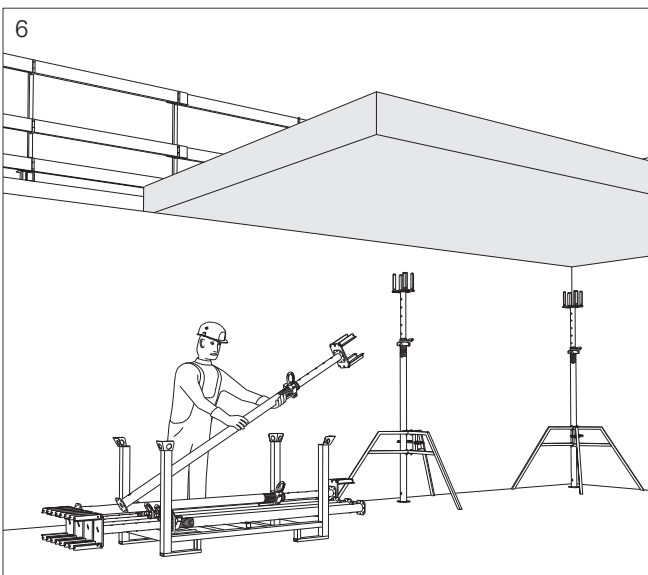


Accurately stack the plywood formlining in order to be able to clean the stacked sheet edges.



Remove main beams and store in pallets. Take prop load into consideration!

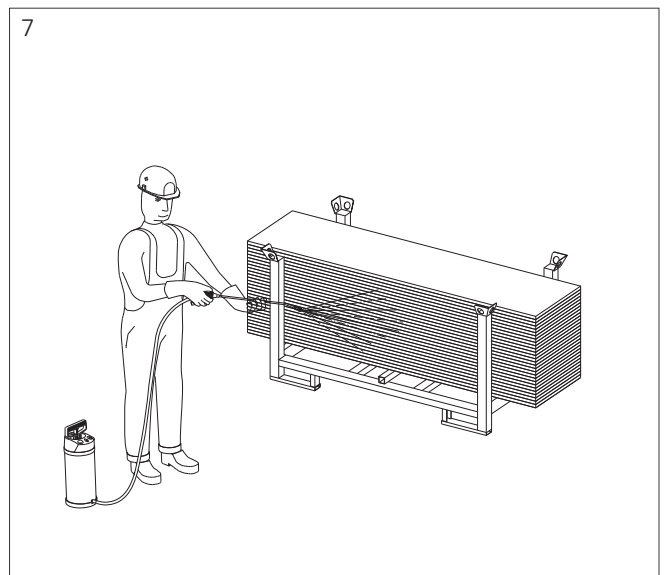
In those cases where the formwork is not dismantled or if back-propping is used, concreting of a slab above could lead to overloading of the props.



Remove the Crosshead Props and store them in pallets.



- For horizontal transport, the heads stay attached to the props!
- Accurately stack the plywood formlining in order to be able to clean the stacked sheet edges.



Before the first and each further use, spray the plywood formlining edges with, e.g. PERI Bio Clean. This ensures easier shuttering and striking, and preserves the plywood.

With Beam Formwork UZ

For beams up to $h = 80$ cm

Consisting of UZ Beam Bracket 40 (15a) and perforated rail (15b).

- No formwork ties up to $h = 80$ cm.
- Cross-sections are to be formed continuously.
- Girders, timbers or, e.g. TRIO elements, can be used as side and slab formwork.
- For extra-wide beams, the perforated rails can be coupled together.

Max. beam widths

for side plate width $b = 10$ cm

1 x UZ Perforated Rail 80 = 45 cm

2 x UZ Perforated Rail 80 = 135 cm

1 x UZ Perforated Rail 129 = 95 cm

(Fig. A7.01)

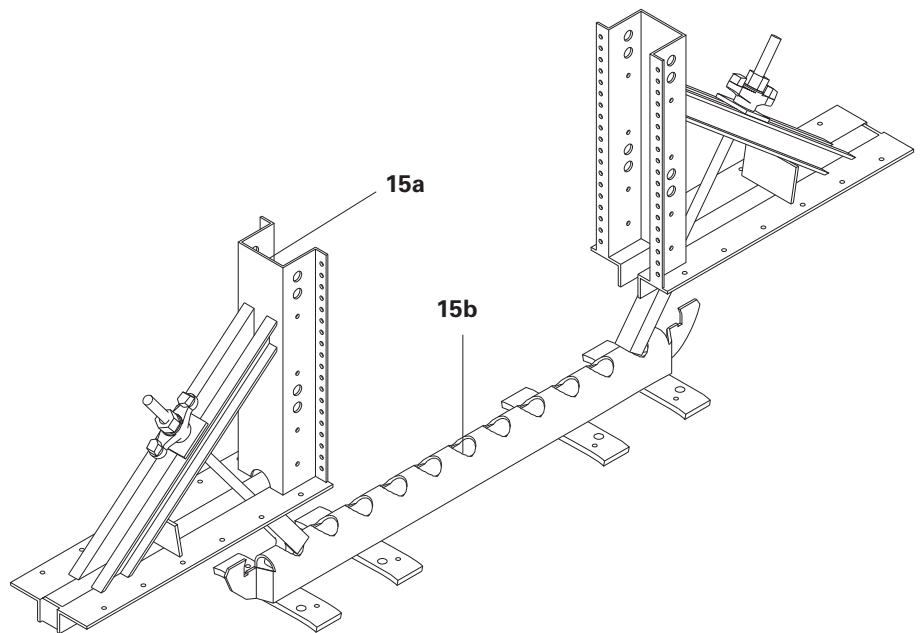


Fig. A7.01

With Stopend Angle AW

For beams up to $h = 60$ cm

The Stopend Angle (11) can be nailed to the plywood formlining as stopend formwork up to $h = 40$ cm. (Fig. A7.02)

With the AW Clamp 8-10, larger beams are possible. (Fig. A7.03)

TRIO, MAXIMO pr DOMINO elements can be used as side formwork. (Fig. A7.04)

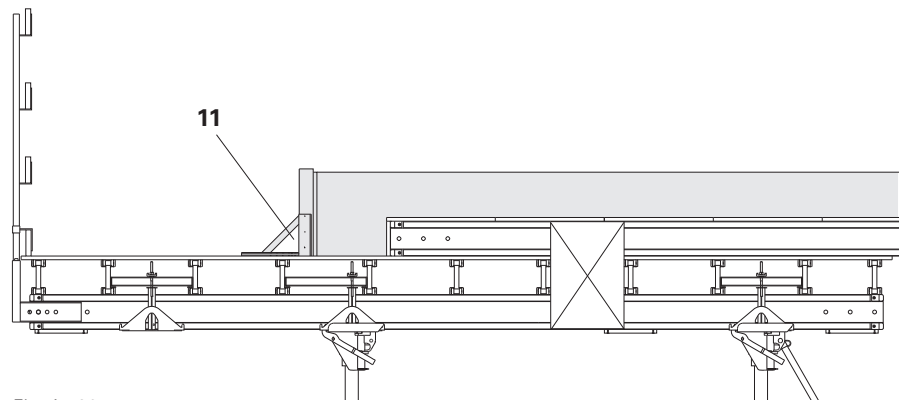


Fig. A7.02



Used plywood formlining can be used for the working areas.

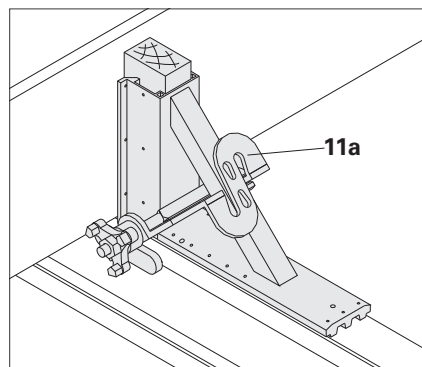


Fig. A7.03

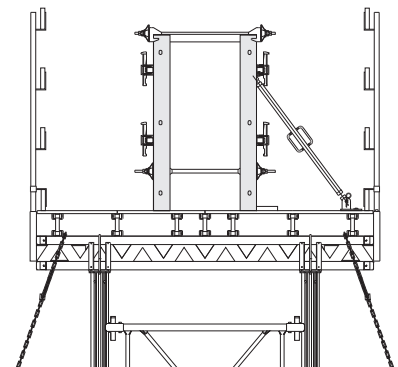
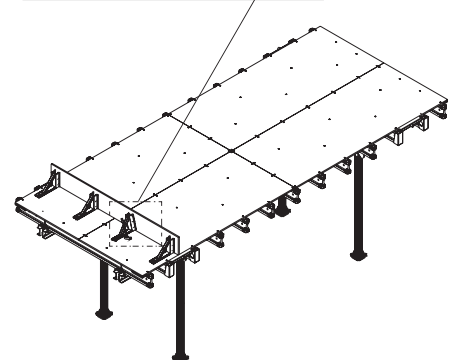
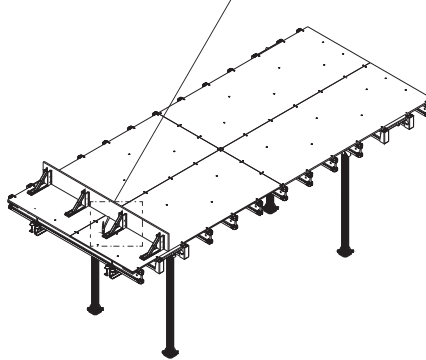
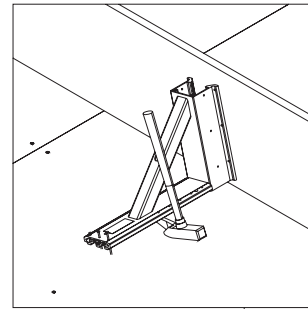
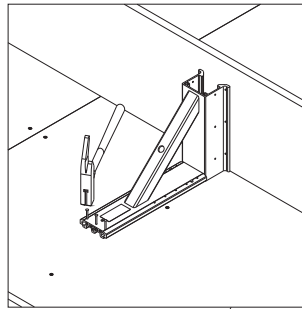


Fig. A7.04

With Stopend Angle AW

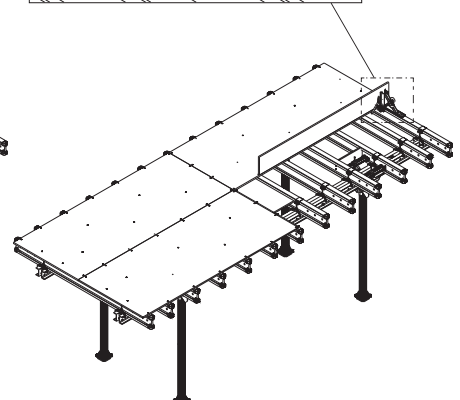
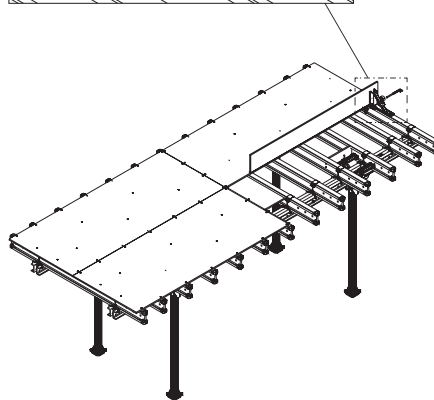
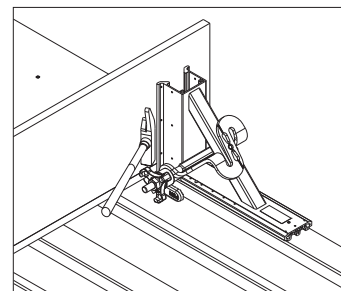
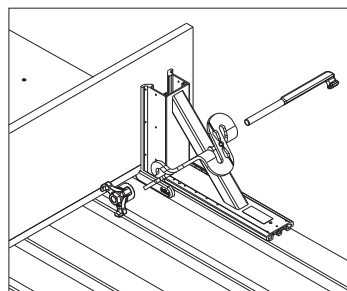
Fixing with nails

- Nailing is carried out on the plywood formlining, boards, planking, panels or timbers.
- Nailing at an angle ensures better fixing as well as looking after the girders and plywood formlining.
- The striking joint allows easier striking.



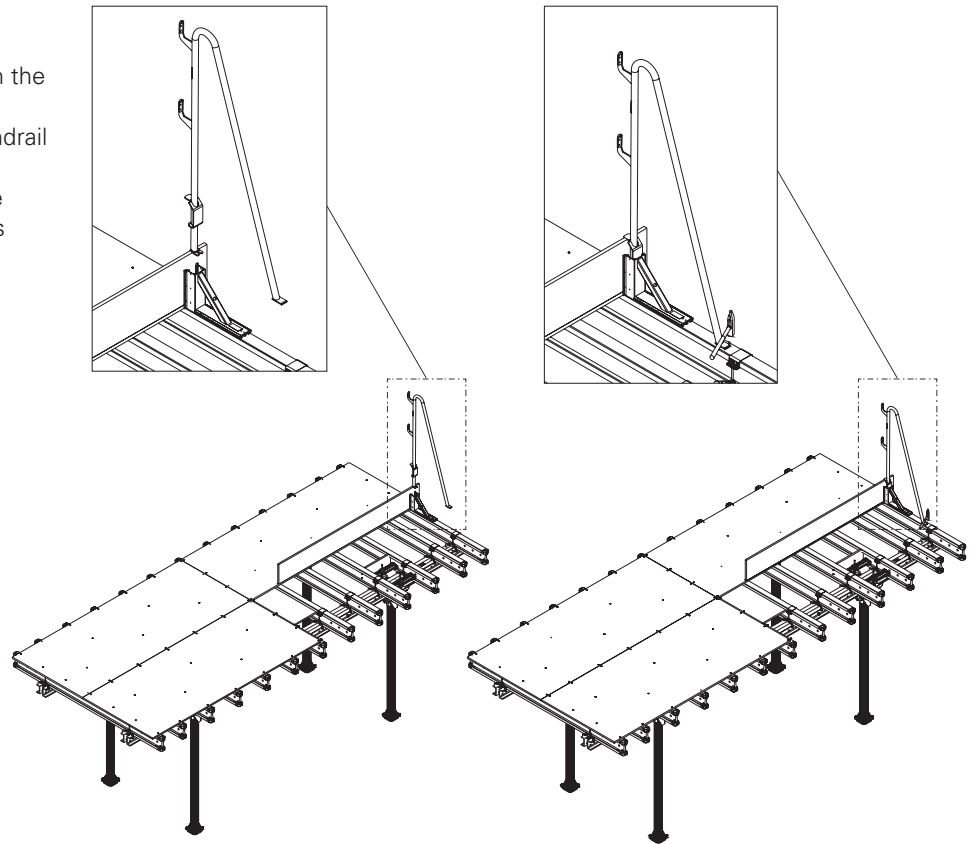
Fixing with AW Clamp 8-10

- Push the AW Clamp 8-10 over the Stopend Angle AW.
- Press the Stopend Angle AW together with the Clamp firmly against the stopends.
- Tighten the nut of the Clamp AW with the hammer.



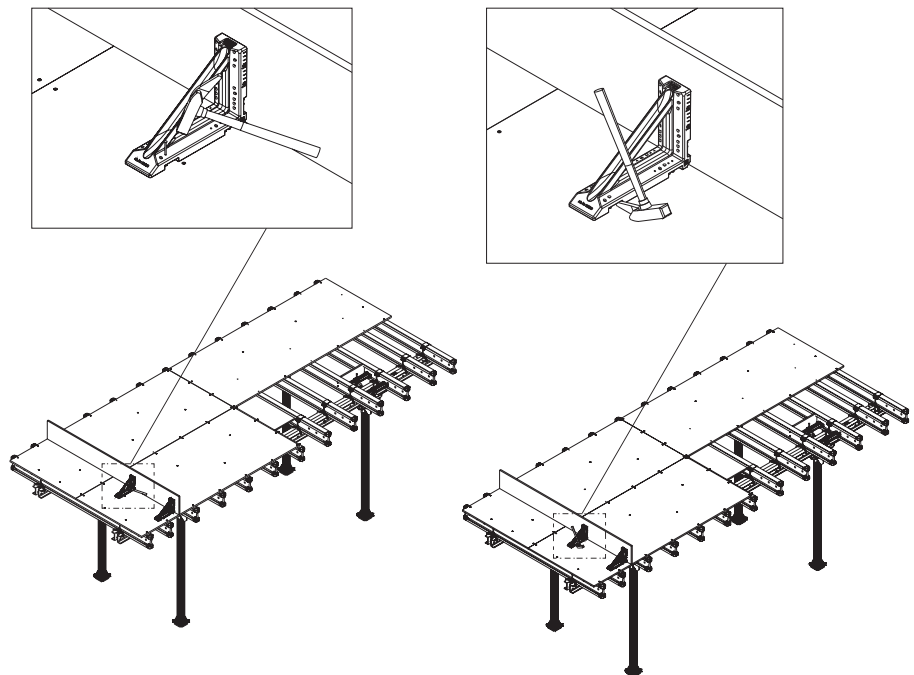
Assembly of the guardrails

- Mount the AW Handrail Post on the Stopend Angle.
- Insert locking device of the Handrail Post.
- Secure the Handrail Post on the girder or formlining using 2 nails $\varnothing 3.1 \times 80$.



With the plastic Stopend Angle

Nail with 8 nails $\varnothing 3.1 \times 65$ mm
(6 at the front and 2 at the back).



Overview of edge tables

(Fig. A8.01)



The basis of the MULTIFLEX is an all-side horizontal non-displaceable supported slab formwork! This is given with circumferential walls and pre-concreted beams. Otherwise, the transfer of the horizontal loads according to valid standards has to be guaranteed by means of other measures supplied by the contractor, e.g. bracing.

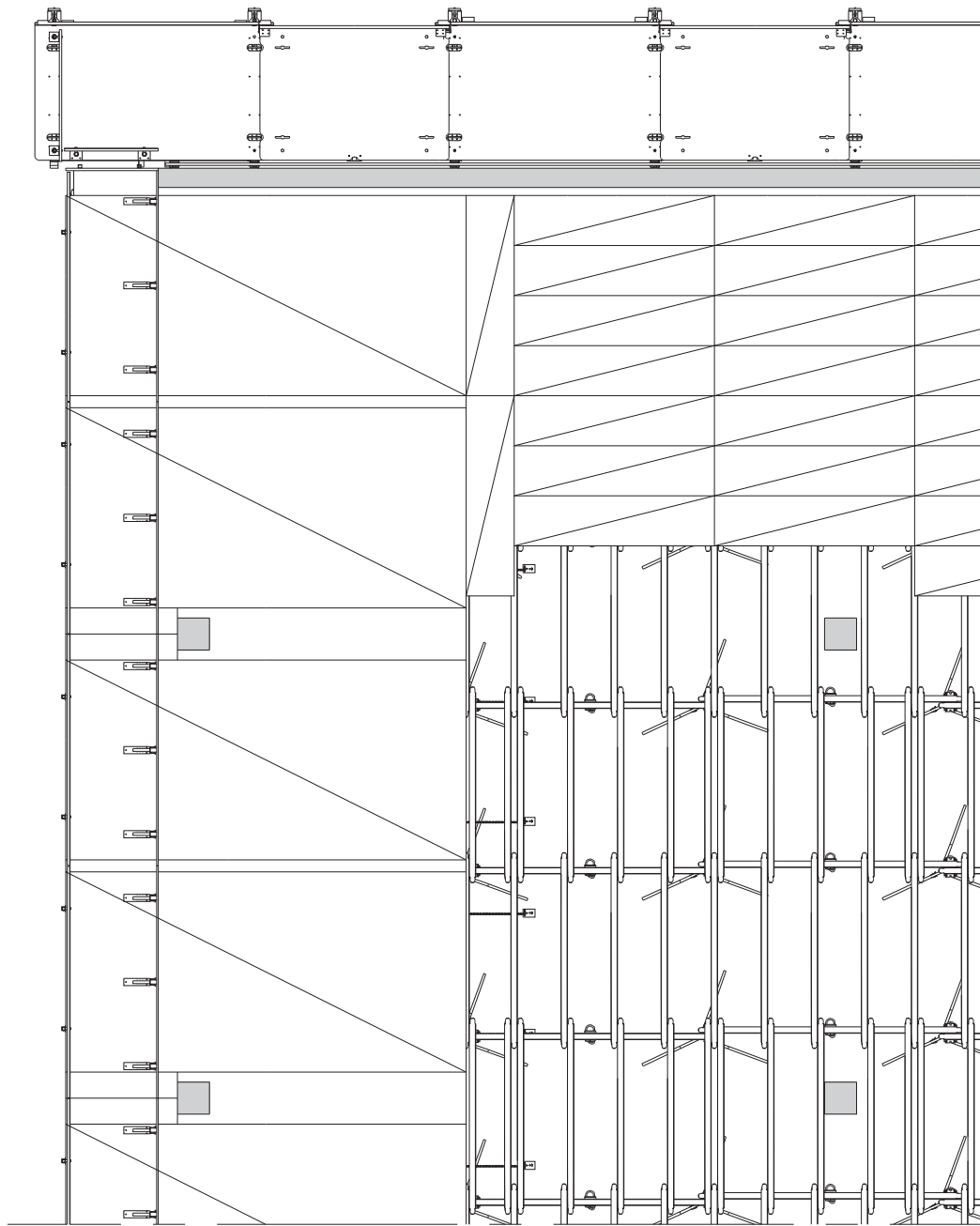


Fig. A8.01

Overview of starting bay

(Fig. A8.02)

VT20: $c < 75 \text{ cm}$; $e = c/2$

VT 20: $c \geq 75 \text{ cm}$; $e = 50 \text{ cm}$

GT 24: $c < 90 \text{ cm}$; $e = 30 \text{ cm}$

GT 24: $c \geq 90 \text{ cm}$; $e = 45 \text{ cm}$

c : width of interior span of the main beam or prop spacing

e : length of cantilever

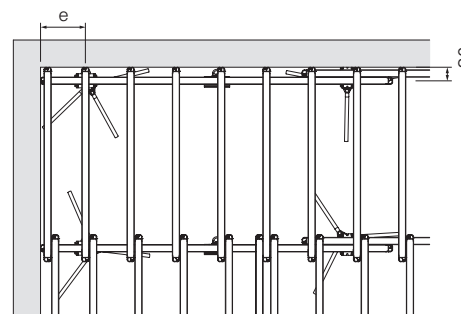


Fig. A8.02

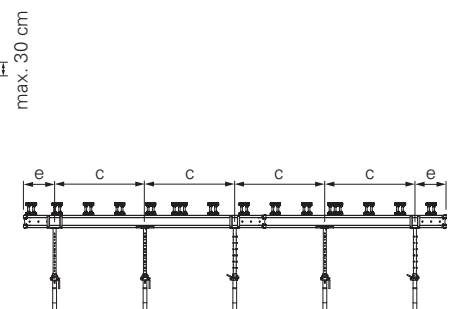
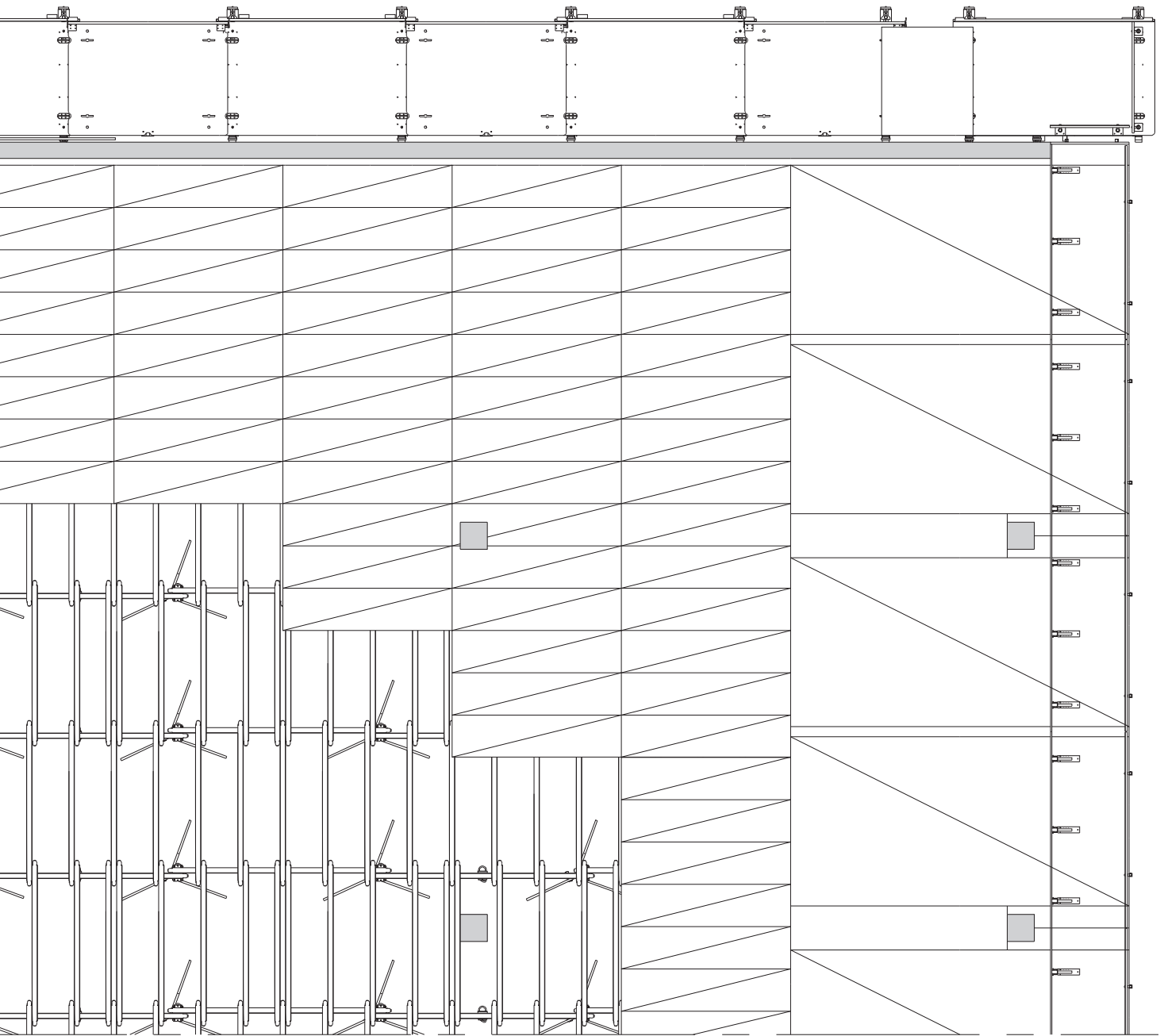


Fig. A8.03



A9 Dimensioning of the slab formwork

PERI Design Tables

Example: dimensioning with VT 20 / VT 20 girder combination

Slab thickness: $d = 20 \text{ cm}$
 Clear height: $h = 2.80 \text{ m}$
 Main and cross beam: VT 20
 Plywood formlining: 21 mm,
 62.5 x 250 cm

Slab thickness d [m]		0.10			0.12			0.14			0.16			0.18			0.20			
Load q* [kN/m²]		4.4			4.8			5.3			5.8			6.3			6.8			
Cross beam spacing a [m]		0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	
Cantilever e [m]	0.25	0.50	3.21	3.41	3.67	3.04	3.23	3.48	2.91	3.09	3.33	2.79	2.97	3.20	2.70	2.86	3.09	2.61	2.77	2.99
			7.3	7.8	8.4	7.7	8.2	8.9	8.1	8.6	9.3	8.5	9.1	9.8	8.9	9.5	10.2	9.3	9.9	10.7
	0.375	0.75	3.21	3.41	3.67	3.04	3.23	3.48	2.91	3.09	3.33	2.79	2.97	3.20	2.70	2.86	3.09	2.61	2.77	2.99
			11.0	11.7	12.6	11.6	12.3	13.3	12.2	13.0	14.0	12.8	13.6	14.7	13.4	14.2	15.3	14.0	14.9	16.0
	0.50	1.00	3.21	3.41	3.67	3.04	3.23	3.48	2.91	3.09	3.33	2.79	2.97	3.20	2.70	2.86	3.09	2.61	2.77	2.99
			14.7	15.6	16.8	15.5	16.4	17.7	16.3	17.3	18.6	17.1	18.1	19.5	17.9	19.0	20.4	18.6	19.8	21.3
	0.50	1.25	3.21	3.41	3.67	3.04	3.23	3.46	2.91	3.09	3.14	2.79	2.88	2.88	2.66	2.66	2.66	2.46	2.46	2.46
			18.3	19.5	21.0	19.3	20.5	22.0	20.3	21.6	22.0	21.3	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	0.50	1.50	3.21	3.21	3.21	2.89	2.89	2.89	2.62	2.62	2.62	2.40	2.40	2.40	2.21	2.21	2.21	2.05	2.05	2.05
			22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	0.50	1.75	2.75	2.75	2.75	2.47	2.47	2.47	2.25	2.25	2.25	2.06	2.06	2.06	1.90	1.90	1.90	1.76	1.76	1.76
			22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	0.50	2.00	2.41	2.41	2.41	2.16	2.16	2.16	1.97	1.97	1.97	1.80	1.80	1.80	1.66	1.66	1.66	1.54	1.54	1.54
			22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0

Formlining

The 3-Ply Plywood, 21 mm, has been taken into consideration. Values for other sheets: see PERI Tables.

1. Cross beam spacing a

Support of the formlining is subject to the slab thickness and the type of plywood formlining used.

(Fig. A9.02)

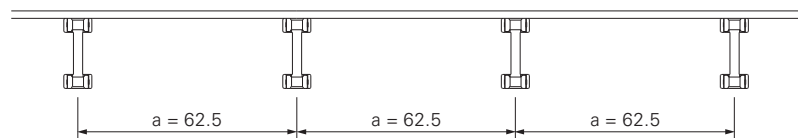


Fig. A9.02

Cross beam spacing 62.5 cm

2. Main girder spacing b

Support for the cross beam.

Permissible span for cross beam according to PERI Tables: 2.05 m. Selected: 2.00 m, dependent on the spatial geometry.

(Fig. A9.03)

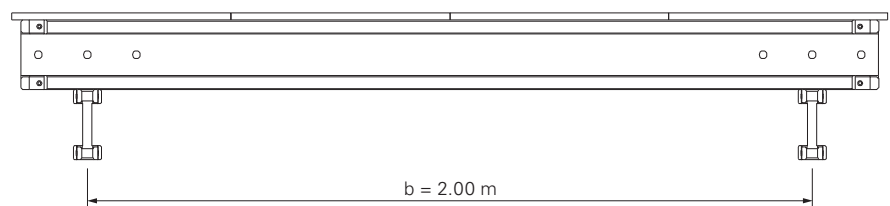


Fig. A9.03

Main beam spacing 2.00 m

3. Prop spacing c

Supporting the main beam.
(Fig. A9.04)

Prop spacing 1.50 m

4. Prop load

Value from the PERI Tables = 22.0 kN.
Selecting a main beam spacing of
 $b = 2.00$ m, results in a prop load to be
removed of:

$$F = 22 \text{ kN} \times \frac{2.00 \text{ m}}{2.05 \text{ m}} = \mathbf{21.5 \text{ kN}}$$

Select PERI Slab Prop (PEP;
MULTIPROP) corresponding to the
extension length h with permissible
prop load = 21.5 kN.

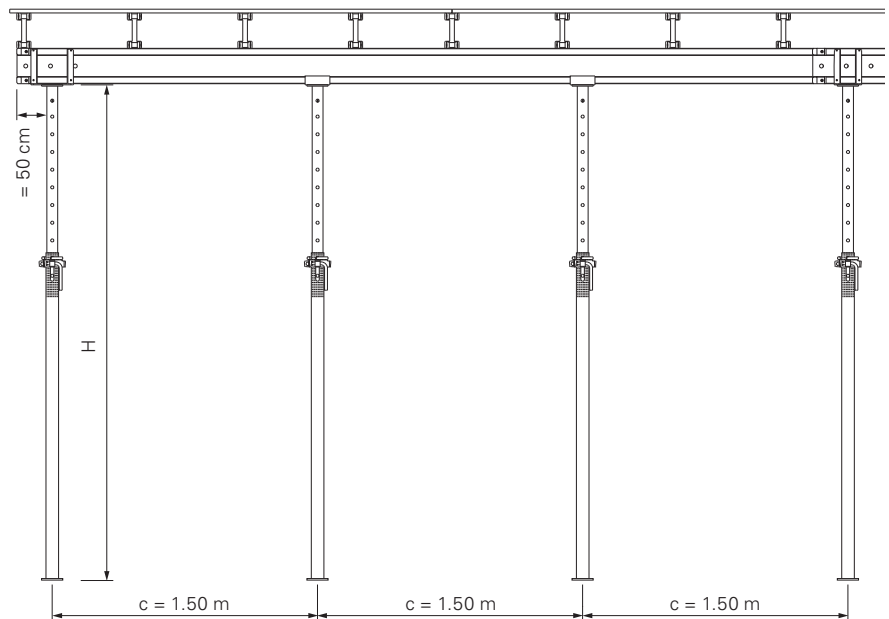


Fig. A9.04

Example with PERI Tables

Carry out the dimensioning for the
MULTIFLEX Slab Formwork with
the tables according to the girder
combination.

Depending on the slab thickness,
the selected cross beam spacing
and plywood result in the main beam
and prop spacings.

(Fig. A9.05)



PERI MULTIFLEX Configurator

Calculations for quickly optimizing the
girder/prop spacings and MULTIFLEX
girders can also be easily realized using
the PERI MULTIFLEX Configurator.
The PERI MULTIFLEX Configurator is
also available for smartphones and
tablets.

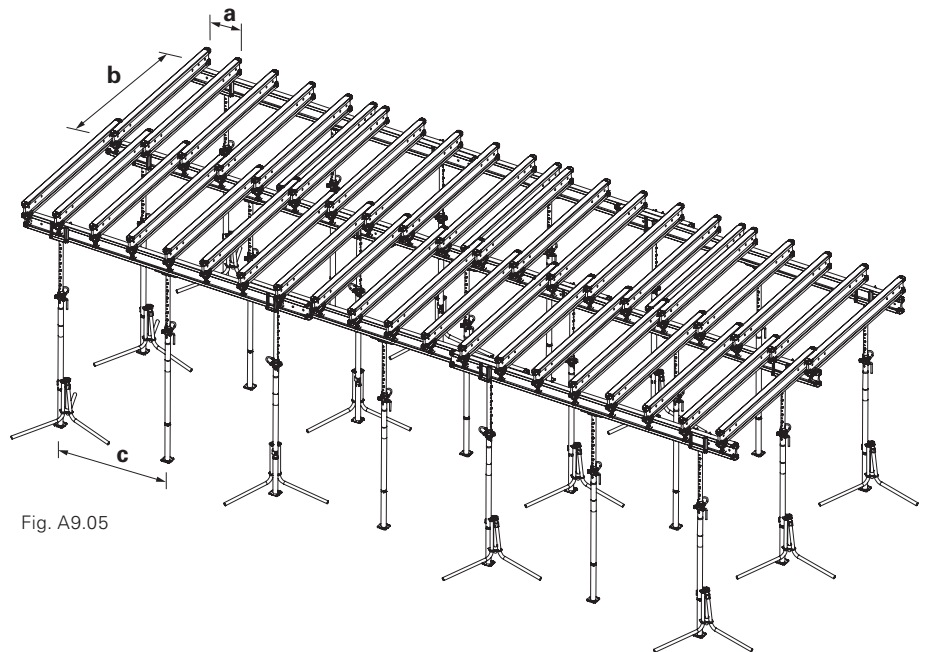


Fig. A9.05

Plywood formlining

Overview, static values

Plywood

Type of plywood	Thickness [mm]	Veneers	E-Modulus [N/mm ²] parallel/cross	Perm. σ [N/mm ²] parallel/cross
Fin-Ply	21	Birch	8560/6610	15.0/12.4
Fin-Ply, Maxi	20	Birch	7500/5760	13.0/10.5
Fin-Ply, USA	19 / ¾"	Birch	6180/6880	12.0/11.5
Fin-Ply	18	Birch	8730/6440	15.3/12.2
PERI Birch	21	Birch	8560/6610	15.0/12.4
PERI Birch, USA	19 / ¾"	Birch	9170/7060	15.7/13.6
PERI Spruce 400	21	Conifer timber	7000/4130	8.3/6.3
3-Ply Plywood	27	Spruce	8000/1070	4.9/1.5
3-Ply Plywood	21	Spruce	8000/1070	5.9/1.3
FinNa-Ply	21	Conifer timber	7910/3710	8.0/5.0

According to the information provided by the manufacturers, the static/mechanical values given in the table refer to a moisture content of 15 %.

However, according to the GSV, the values should take into consideration a wood moisture content of 20 %. The values for the E-Modulus are therefore to be reduced by a factor of 0.9167 and the values for the permissible stress by a factor of 0.875.

The fibres of the face veneer span in the direction of the first length shown for the plywood size.

Solid timber

	E-Modulus [N/mm ²] parallel	Perm. σ [N/mm ²] parallel
Conifer timber, Strength Class C24	11000	11

The permissible value according to DIN 1052 results in a short duration of load for Application Class 2.

Plywood formlining

Plywood 21 mm

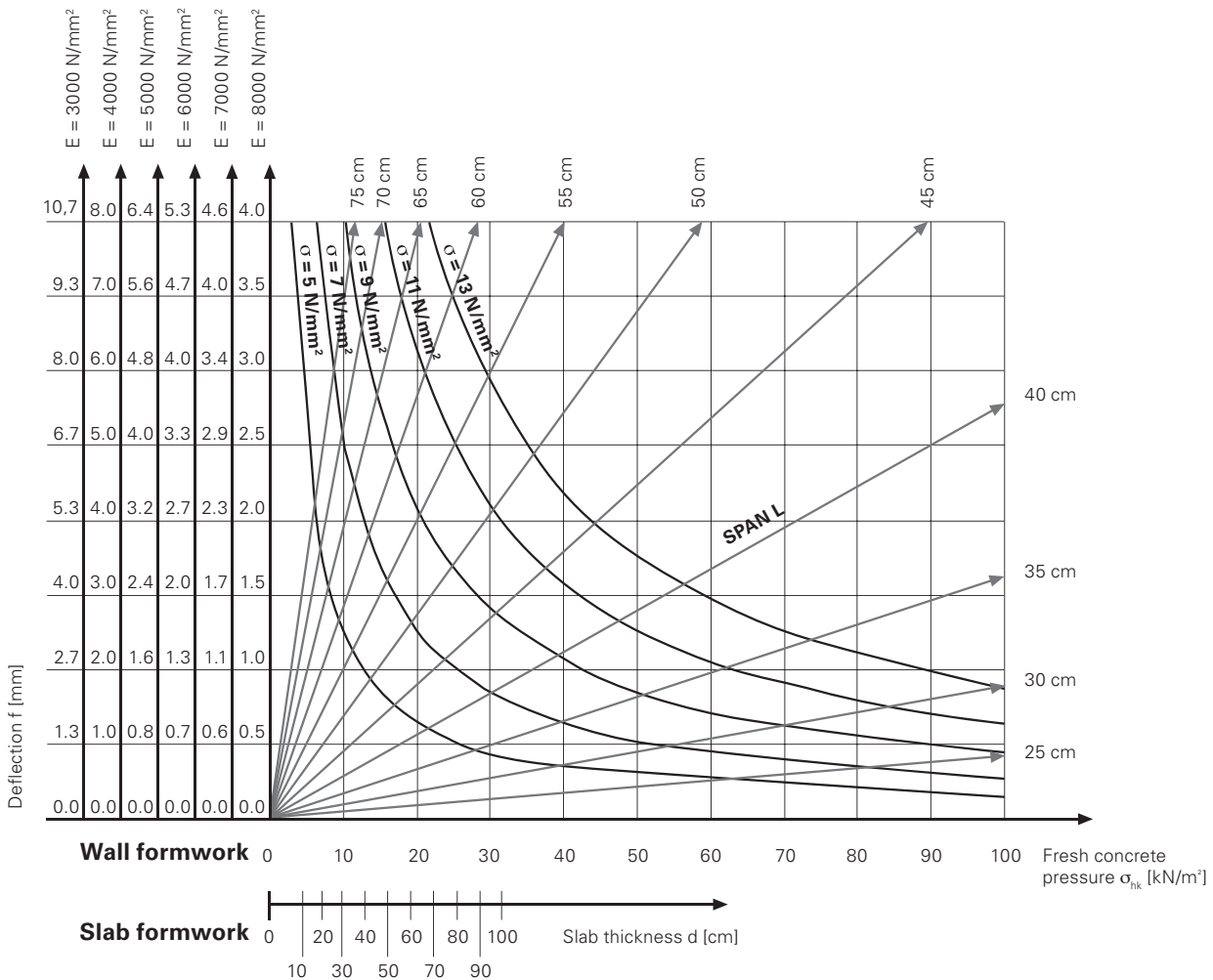
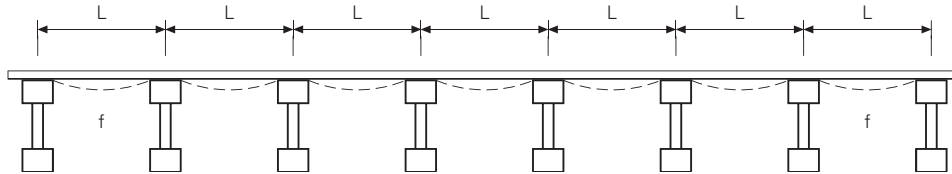
The E-Modulus and the permissible stress are based on the grade and moisture content of the plywood.
(See "Overview, static values")

max. deflection

$$f = \frac{0.0068 \cdot \sigma_{hk} \cdot L^4}{E \cdot I}$$

max. moment
(valid for min. 3 spans)

$$M = 0.1071 \cdot \sigma_{hk} \cdot L^2$$



MULTIFLEX

GT 24 used as slab girder

Slab thickness d [m]		0.10			0.12			0.14			0.16			0.18			0.20			
Load q* [kN/m²]		4.4			4.8			5.3			5.8			6.3			6.8			
Cross beam spacing a [m]		0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	
Cantilever e [m]	0.30	0.60	3.99	4.24	4.57	3.79	4.03	4.34	3.62	3.85	4.14	3.48	3.70	3.98	3.36	3.57	3.84	3.25	3.45	3.72
			10.9	11.6	12.5	11.6	12.3	13.2	12.2	12.9	13.9	12.8	13.5	14.6	13.3	14.2	15.3	13.9	14.8	15.9
	0.45	0.90	3.99	4.24	4.57	3.79	4.03	4.34	3.62	3.85	4.14	3.48	3.70	3.98	3.36	3.57	3.84	3.25	3.45	3.72
			16.4	17.4	18.8	17.3	18.4	19.8	18.2	19.4	20.9	19.1	20.3	21.9	20.0	21.3	22.9	20.9	22.2	23.9
	0.45	1.20	3.99	4.24	4.57	3.79	4.03	4.34	3.62	3.85	4.14	3.48	3.70	3.82	3.36	3.52	3.52	3.25	3.27	3.27
			21.9	23.3	25.1	23.1	24.6	26.4	24.3	25.8	27.8	25.5	27.1	28.0	26.7	28.0	28.0	27.8	28.0	28.0
	0.45	1.50	3.99	4.09	4.09	3.67	3.67	3.67	3.34	3.34	3.34	3.05	3.05	3.05	2.82	2.82	2.82	2.61	2.61	2.61
			27.4	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
	0.45	1.80	3.41	3.41	3.41	3.06	3.06	3.06	2.78	2.78	2.78	2.55	2.55	2.55	2.35	2.35	2.35	2.18	2.18	2.18
			28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
	0.45	2.10	2.92	2.92	2.92	2.62	2.62	2.62	2.38	2.38	2.38	2.18	2.18	2.18	2.01	2.01	2.01	1.87	1.87	1.87
			28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0

Slab thickness d [m]		0.22			0.24			0.25			0.26			0.28			0.30			
Load q* [kN/m²]		7.3			7.8			8.0			8.3			8.8			9.3			
Cross beam spacing a [m]		0.75	0.625	0.50	0.625	0.50	0.40	0.625	0.50	0.40	0.625	0.50	0.40	0.625	0.50	0.40	0.625	0.50	0.40	
Cantilever e [m]	0.30	0.60	3.15	3.35	3.61	3.26	3.51	3.79	3.22	3.47	3.74	3.18	3.43	3.69	3.11	3.35	3.61	3.04	3.28	3.53
			14.5	15.4	16.6	16.0	17.2	18.6	16.3	17.5	18.9	16.6	17.9	19.2	17.2	18.5	19.9	17.7	19.1	20.6
	0.45	0.90	3.15	3.35	3.61	3.26	3.51	3.79	3.22	3.47	3.69	3.18	3.43	3.58	3.11	3.35	3.38	3.04	3.20	3.20
			21.7	23.1	24.9	24.0	25.8	27.8	24.4	26.3	28.0	24.9	26.8	28.0	25.7	27.7	28.0	26.6	28.0	28.0
	0.45	1.20	3.05	3.05	3.05	2.86	2.86	2.86	2.77	2.77	2.77	2.69	2.69	2.69	2.54	2.54	2.54	2.40	2.40	2.40
			28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
	0.45	1.50	2.44	2.44	2.44	2.29	2.29	2.29	2.22	2.22	2.22	2.15	2.15	2.15	2.03	2.03	2.03	1.92	1.92	1.92
			28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
	0.45	1.80	2.03	2.03	2.03	1.90	1.90	1.90	1.85	1.85	1.85	1.79	1.79	1.79	1.69	1.69	1.69	1.60	1.60	1.60
			28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
	0.45	2.10	1.74	1.74	1.74	1.63	1.63	1.63	1.58	1.58	1.58	1.54	1.54	1.54	1.45	1.45	1.45	1.37	1.37	1.37
			28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0

MULTIFLEX

GT 24 used as slab girder

Slab thickness d [m]		0.35		0.40		0.45		0.50		0.60		0.70		0.80		0.90		1.00		
Load q* [kN/m²]		10.6		11.9		13.3		14.6		17.3		20.0		22.5		25.0		27.4		
Cross beam spacing a [m]		0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	
Cantilever e [m]	0.30	0.60	3.12	3.36	2.99	3.22	2.88	3.10	2.77	3.00	2.54	2.57	2.22	2.22	1.98	1.98	1.78	1.78	1.62	1.62
			20.8	22.4	22.5	24.2	24.1	25.9	25.5	27.6	27.7	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
	0.45	0.90	2.80	2.80	2.48	2.48	2.23	2.23	2.03	2.03	1.71	1.71	1.48	1.48	1.32	1.32	1.19	1.19	1.08	1.08
			28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
	0.45	1.20	2.10	2.10	1.86	1.86	1.67	1.67	1.52	1.52	1.28	1.28	1.11	1.11	0.99	0.99	0.89	0.89	0.81	0.81
			28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
	0.45	1.50	1.68	1.68	1.49	1.49	1.34	1.34	1.22	1.22	1.03	1.03	0.89	0.89	0.79	0.79	0.71	0.71	0.65	0.65
			28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
	0.45	1.80	1.40	1.40	1.24	1.24	1.12	1.12	1.01	1.01	0.86	0.86	0.74	0.74	0.66	0.66	0.59	0.59	0.54	0.54
			28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
	0.45	2.10	1.20	1.20	1.06	1.06	0.96	0.96	0.87	0.87	0.73	0.73	0.63	0.63	0.56	0.56	0.51	0.51	0.46	0.46
			28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0

Calculation bases:

*Load according to EN 12812

Dead load

Concrete load

Equivalent load: concreting

Equivalent load: working conditions

Total load

$$Q_1 = 0.40 \text{ kN/m}^2$$

$$Q_{2,b} = 24.5 \text{ kN/m}^3 \times d \text{ [m]}$$

$$Q_4 = 0.10 \times Q_{2,b}$$

$$0.75 \text{ kN/m}^2 \leq Q_4 \leq 1.75 \text{ kN/m}^2$$

$$Q_{2,p} = 0.75 \text{ kN/m}^2$$

$$Q = Q_1 + Q_{2,b} + Q_{2,p} + Q_4$$

Table values mean the following:

2.77 perm. main beam spacing b [m]

28.0 actual prop load [kN]

- Deflection has been limited to $l/500$
- Main beam support at centre of girder nodes
- Cross beam assumed as single span

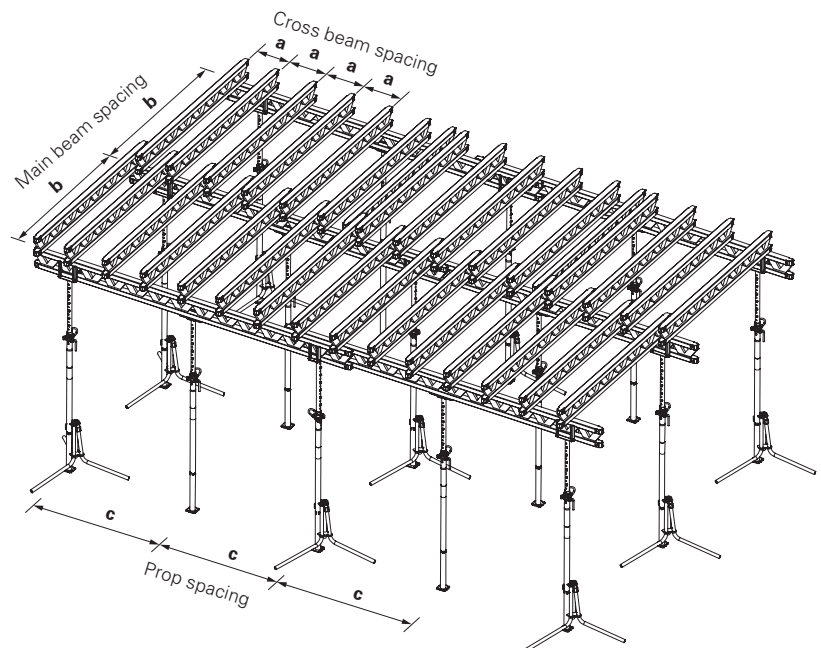
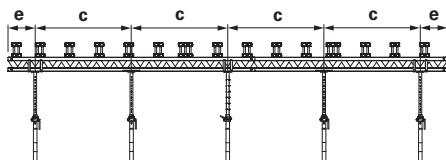
For cantilevers:

$c < 90 \text{ cm}$; $e = 30 \text{ cm}$

$c \geq 90 \text{ cm}$; $e = 45 \text{ cm}$

c: width of interior span of main beam or prop spacing

e: length of cantilever



MULTIFLEX

VT 20 used as slab girder

Slab thickness d [m]		0.10			0.12			0.14			0.16			0.18			0.20			
Load q* [kN/m²]		4.4			4.8			5.3			5.8			6.3			6.8			
Cross beam spacing a [m]		0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	
Cantilever e [m]	0.25	0.50	3.21	3.41	3.67	3.04	3.23	3.48	2.91	3.09	3.33	2.79	2.97	3.20	2.70	2.86	3.09	2.61	2.77	2.99
			7.3	7.8	8.4	7.7	8.2	8.9	8.1	8.6	9.3	8.5	9.1	9.8	8.9	9.5	10.2	9.3	9.9	10.7
	0.375	0.75	3.21	3.41	3.67	3.04	3.23	3.48	2.91	3.09	3.33	2.79	2.97	3.20	2.70	2.86	3.09	2.61	2.77	2.99
			11.0	11.7	12.6	11.6	12.3	13.3	12.2	13.0	14.0	12.8	13.6	14.7	13.4	14.2	15.3	14.0	14.9	16.0
	0.50	1.00	3.21	3.41	3.67	3.04	3.23	3.48	2.91	3.09	3.33	2.79	2.97	3.20	2.70	2.86	3.09	2.61	2.77	2.99
			14.7	15.6	16.8	15.5	16.4	17.7	16.3	17.3	18.6	17.1	18.1	19.5	17.9	19.0	20.4	18.6	19.8	21.3
	0.50	1.25	3.21	3.41	3.67	3.04	3.23	3.46	2.91	3.09	3.14	2.79	2.88	2.88	2.66	2.66	2.66	2.46	2.46	2.46
			18.3	19.5	21.0	19.3	20.5	22.0	20.3	21.6	22.0	21.3	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	0.50	1.50	3.21	3.21	3.21	2.89	2.89	2.89	2.62	2.62	2.62	2.40	2.40	2.40	2.21	2.21	2.21	2.05	2.05	2.05
			22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	0.50	1.75	2.75	2.75	2.75	2.47	2.47	2.47	2.25	2.25	2.25	2.06	2.06	2.06	1.90	1.90	1.90	1.76	1.76	1.76
			22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	0.50	2.00	2.41	2.41	2.41	2.16	2.16	2.16	1.97	1.97	1.97	1.80	1.80	1.80	1.66	1.66	1.66	1.54	1.54	1.54
			22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0

Slab thickness d [m]		0.22			0.24			0.25			0.26			0.28			0.30			
Load q* [kN/m²]		7.3			7.8			8.0			8.3			8.8			9.3			
Cross beam spacing a [m]		0.75	0.625	0.50	0.625	0.50	0.40	0.625	0.50	0.40	0.625	0.50	0.40	0.625	0.50	0.40	0.625	0.50	0.40	
Cantilever e [m]	0.25	0.50	2.53	2.69	2.90	2.62	2.82	3.04	2.59	2.79	3.00	2.56	2.75	2.97	2.50	2.69	2.90	2.44	2.63	2.84
			9.7	10.3	11.1	10.7	11.5	12.4	10.9	11.7	12.6	11.1	12.0	12.9	11.5	12.4	13.3	11.9	12.8	13.8
	0.375	0.75	2.53	2.69	2.90	2.62	2.82	3.04	2.59	2.79	3.00	2.56	2.75	2.97	2.50	2.69	2.90	2.44	2.63	2.84
			14.5	15.5	16.7	16.1	17.3	18.6	16.4	17.6	19.0	16.6	17.9	19.3	17.2	18.6	20.0	17.8	19.2	20.7
	0.50	1.00	2.53	2.69	2.87	2.62	2.69	2.69	2.59	2.61	2.61	2.53	2.53	2.53	2.39	2.39	2.39	2.27	2.27	2.27
			19.4	20.6	22.0	21.4	22.0	22.0	21.8	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	0.50	1.25	2.30	2.30	2.30	2.15	2.15	2.15	2.09	2.09	2.09	2.03	2.03	2.03	1.91	1.91	1.91	1.81	1.81	1.81
			22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	0.50	1.50	1.92	1.92	1.92	1.80	1.80	1.80	1.74	1.74	1.74	1.69	1.69	1.69	1.59	1.59	1.59	1.51	1.51	1.51
			22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	0.50	1.75	1.64	1.64	1.64	1.54	1.54	1.54	1.49	1.49	1.49	1.45	1.45	1.45	1.37	1.37	1.37	1.29	1.29	1.29
			22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	0.50	2.00	1.44	1.44	1.44	1.35	1.35	1.35	1.31	1.31	1.31	1.27	1.27	1.27	1.20	1.20	1.20	1.13	1.13	1.13
			22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0

MULTIFLEX

VT 20 used as slab girder

Slab thickness d [m]		0.35		0.40		0.45		0.50		0.60		0.70		0.80		0.90		1.00		
Load q* [kN/m²]		10.6		11.9		13.3		14.6		17.3		20.0		22.5		25.0		27.4		
Cross beam spacing a [m]		0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	
Cantilever e [m]	0.25	0.50	2.51	2.70	2.40	2.59	2.31	2.49	2.24	2.41	2.11	2.27	2.00	2.09	1.86	1.86	1.68	1.68	1.53	1.53
			13.9	15.0	15.0	16.2	16.1	17.4	17.2	18.5	19.2	20.6	21.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	0.375	0.75	2.51	2.64	2.34	2.34	2.10	2.10	1.91	1.91	1.61	1.61	1.40	1.40	1.24	1.24	1.12	1.12	1.02	1.02
			20.9	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	0.50	1.00	1.98	1.98	1.76	1.76	1.58	1.58	1.43	1.43	1.21	1.21	1.05	1.05	0.93	0.93	0.84	0.84	0.76	0.76
			22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	0.50	1.25	1.58	1.58	1.41	1.41	1.26	1.26	1.15	1.15	0.97	0.97	0.84	0.84	0.74	0.74	0.67	0.67	0.61	0.61
			22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	0.50	1.50	1.32	1.32	1.17	1.17	1.05	1.05	0.96	0.96	0.81	0.81	0.70	0.70	0.62	0.62	0.56	0.56	0.51	0.51
			22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	0.50	1.75	1.13	1.13	1.00	1.00	0.90	0.90	0.82	0.82	0.69	0.69	0.60	0.60	0.53	0.53	0.48	0.48	0.44	0.44
			22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	0.50	2.00	0.99	0.99	0.88	0.88	0.79	0.79	0.72	0.72	0.60	0.60	0.52	0.52	0.47	0.47	0.42	0.42	0.38	0.38
			22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0

Calculation bases:

*Load according to EN 12812

Dead load

Concrete load

Equivalent load: concreting

Equivalent load: working conditions

Total load

$$Q_1 = 0.40 \text{ kN/m}^2$$

$$Q_{2,b} = 24.5 \text{ kN/m}^3 \times d \text{ [m]}$$

$$Q_4 = 0.10 \times Q_{2,b}$$

$$0.75 \text{ kN/m}^2 \leq Q_4 \leq 1.75 \text{ kN/m}^2$$

$$Q_{2,p} = 0.75 \text{ kN/m}^2$$

$$Q = Q_1 + Q_{2,b} + Q_{2,p} + Q_4$$

Table values mean the following:

2.61 perm. main beam spacing b [m]

22.0 actual prop load [kN]

- Deflection has been limited to $l/500$
- Cross beam assumed as single span

For cantilevers:

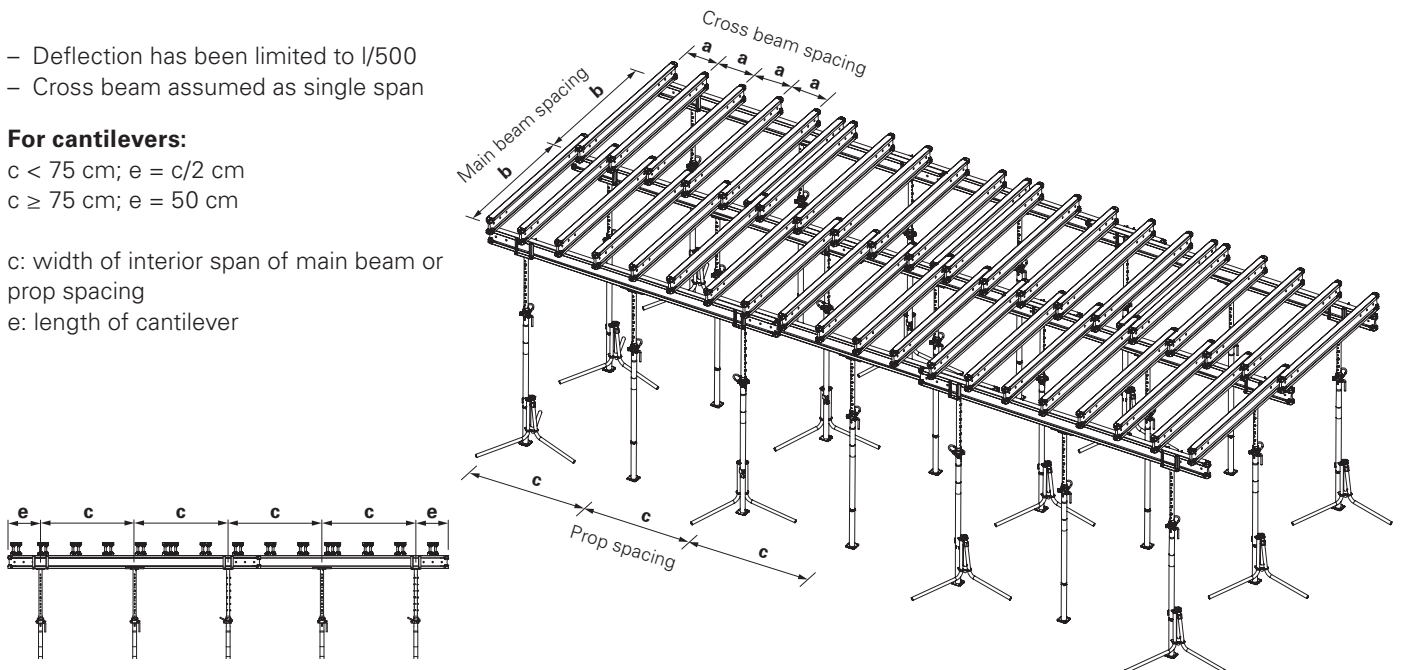
$c < 75 \text{ cm}$; $e = c/2 \text{ cm}$

$c \geq 75 \text{ cm}$; $e = 50 \text{ cm}$

c: width of interior span of main beam or

prop spacing

e: length of cantilever



Cross Beam: GT 24

Main Beam: 2 x GT 24

Slab thickness d [m]		0.10			0.12			0.14			0.16			0.18			0.20			
Load q* [kN/m²]		4.4			4.8			5.3			5.8			6.3			6.8			
Cross beam spacing a [m]		0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	
Cantilever e [m]	0.30	0.60	3.99	4.24	4.57	3.79	4.03	4.34	3.62	3.85	4.14	3.48	3.70	3.98	3.36	3.57	3.84	3.25	3.45	3.72
			10.9	11.6	12.5	11.6	12.3	13.2	12.2	12.9	13.9	12.8	13.5	14.6	13.3	14.2	15.3	13.9	14.8	15.9
	0.45	0.90	3.99	4.24	4.57	3.79	4.03	4.34	3.62	3.85	4.14	3.48	3.70	3.98	3.36	3.57	3.84	3.25	3.45	3.72
			16.4	17.4	18.8	17.3	18.4	19.8	18.2	19.4	20.9	19.1	20.3	21.9	20.0	21.3	22.9	20.9	22.2	23.9
	0.45	1.20	3.99	4.24	4.57	3.79	4.03	4.34	3.62	3.85	4.14	3.48	3.70	3.98	3.36	3.57	3.84	3.25	3.45	3.72
			21.9	23.3	25.1	23.1	24.6	26.4	24.3	25.8	27.8	25.5	27.1	29.2	26.7	28.3	30.5	27.8	29.6	31.9
	0.45	1.50	3.99	4.24	4.57	3.79	4.03	4.34	3.62	3.85	4.14	3.48	3.70	3.98	3.36	3.57	3.84	3.25	3.45	3.72
			27.4	29.1	31.3	28.9	30.7	33.1	30.4	32.3	34.8	31.9	33.9	36.5	33.3	35.4	38.2	34.8	37.0	39.8
	0.45	1.80	3.99	4.24	4.57	3.79	4.03	4.34	3.62	3.85	4.14	3.48	3.70	3.98	3.36	3.57	3.84	3.25	3.45	3.72
			32.8	34.9	37.6	34.7	36.8	39.7	36.5	38.8	41.7	38.3	40.6	43.8	40.0	42.5	45.8	41.7	44.4	47.8
	0.45	2.10	3.99	4.24	4.57	3.79	4.03	4.34	3.62	3.85	4.14	3.48	3.70	3.98	3.36	3.57	3.84	3.25	3.45	3.72
			38.3	40.7	43.9	40.4	43.0	46.3	42.5	45.2	48.7	44.6	47.4	51.1	46.7	49.6	53.4	48.7	51.8	55.8

Slab thickness d [m]		0.22			0.24			0.25			0.26			0.28			0.30			
Load q* [kN/m²]		7.3			7.8			8.0			8.3			8.8			9.3			
Cross beam spacing a [m]		0.75	0.625	0.50	0.625	0.50	0.40	0.625	0.50	0.40	0.625	0.50	0.40	0.625	0.50	0.40	0.625	0.50	0.40	
Cantilever e [m]	0.30	0.60	3.15	3.35	3.61	3.26	3.51	3.79	3.22	3.47	3.74	3.18	3.43	3.69	3.11	3.35	3.61	3.04	3.28	3.53
			14.5	15.4	16.6	16.0	17.2	18.6	16.3	17.5	18.9	16.6	17.9	19.2	17.2	18.5	19.9	17.7	19.1	20.6
	0.45	0.90	3.15	3.35	3.61	3.26	3.51	3.79	3.22	3.47	3.74	3.18	3.43	3.69	3.11	3.35	3.61	3.04	3.28	3.53
			21.7	23.1	24.9	24.0	25.8	27.8	24.4	26.3	28.3	24.9	26.8	28.9	25.7	27.7	29.9	26.6	28.6	30.8
	0.45	1.20	3.15	3.35	3.61	3.26	3.51	3.79	3.22	3.47	3.74	3.18	3.43	3.69	3.11	3.35	3.61	3.04	3.28	3.53
			29.0	30.8	33.2	32.0	34.4	37.1	32.6	35.1	37.8	33.2	35.7	38.5	34.3	37.0	39.8	35.4	38.2	41.1
	0.45	1.50	3.15	3.35	3.61	3.26	3.51	3.79	3.22	3.47	3.74	3.18	3.43	3.69	3.11	3.35	3.61	3.04	3.28	3.53
			36.2	38.5	41.5	40.0	43.1	46.4	40.7	43.9	47.2	41.4	44.6	48.1	42.9	46.2	49.8	44.3	47.7	51.4
	0.45	1.80	3.15	3.35	3.61	3.26	3.51	3.79	3.22	3.47	3.69	3.18	3.43	3.58	3.11	3.35	3.38	3.04	3.20	3.20
			43.5	46.2	49.7	48.0	51.7	55.7	48.9	52.6	56.0	49.7	53.6	56.0	51.5	55.4	56.0	53.2	56.0	56.0
	0.45	2.10	3.15	3.35	3.48	3.26	3.26	3.26	3.16	3.16	3.16	3.07	3.07	3.07	2.90	2.90	2.90	2.75	2.75	2.75
			50.7	53.9	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0

Cross Beam: GT 24

Main Beam: 2 x GT 24

Slab thickness d [m]		0.35		0.40		0.45		0.50		0.60		0.70		0.80		0.90		1.00		
Load q* [kN/m²]		10.6		11.9		13.3		14.6		17.3		20.0		22.5		25.0		27.4		
Cross beam spacing a [m]		0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	
Cantilever e [m]	0.30	0.60	3.12	3.36	2.99	3.22	2.88	3.10	2.77	3.00	2.54	2.83	2.37	2.64	2.23	2.49	2.08	2.37	1.90	2.26
			20.8	22.4	22.5	24.2	24.1	25.9	25.5	27.6	27.7	30.8	29.8	33.3	31.6	35.4	32.8	37.2	32.8	39.0
	0.45	0.90	3.12	3.36	2.99	3.22	2.88	3.10	2.77	3.00	2.54	2.83	2.37	2.64	2.23	2.49	2.08	2.37	1.90	2.16
			31.2	33.6	33.7	36.3	36.1	38.9	38.2	41.4	41.6	46.2	44.7	50.0	47.4	53.0	49.1	55.9	49.1	56.0
	0.45	1.20	3.12	3.36	2.99	3.22	2.88	3.10	2.77	3.00	2.54	2.57	2.22	2.22	1.98	1.98	1.78	1.78	1.62	1.62
			41.6	44.8	44.9	48.4	48.2	51.9	51.0	55.2	55.5	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
	0.45	1.50	3.12	3.36	2.98	2.98	2.68	2.68	2.43	2.43	2.05	2.05	1.78	1.78	1.58	1.58	1.43	1.43	1.30	1.30
			52.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
	0.45	1.80	2.80	2.80	2.48	2.48	2.23	2.23	2.03	2.03	1.71	1.71	1.48	1.48	1.32	1.32	1.19	1.19	1.08	1.08
			56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
	0.45	2.10	2.40	2.40	2.13	2.13	1.91	1.91	1.74	1.74	1.47	1.47	1.27	1.27	1.13	1.13	1.02	1.02	0.93	0.93
			56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0

Calculation bases:

*Load according to EN 12812

Dead load

Concrete load

Equivalent load: concreting

Equivalent load: working conditions

Total load

$$Q_1 = 0.40 \text{ kN/m}^2$$

$$Q_{2,b} = 24.5 \text{ kN/m}^3 \times d \text{ [m]}$$

$$Q_4 = 0.10 \times Q_{2,b}$$

$$0.75 \text{ kN/m}^2 \leq Q_4 \leq 1.75 \text{ kN/m}^2$$

$$Q_{2,p} = 0.75 \text{ kN/m}^2$$

$$Q = Q_1 + Q_{2,b} + Q_{2,p} + Q_4$$

Table values mean the following:

3.16 perm. main beam spacing b [m]

56.0 actual prop load [kN]

- Deflection has been limited to $l/500$
- Main beam support at centre of girder nodes
- Cross beam assumed as single span
- For prop loads < 28.0 kN, 1 x GT 24 as main beam is sufficient.

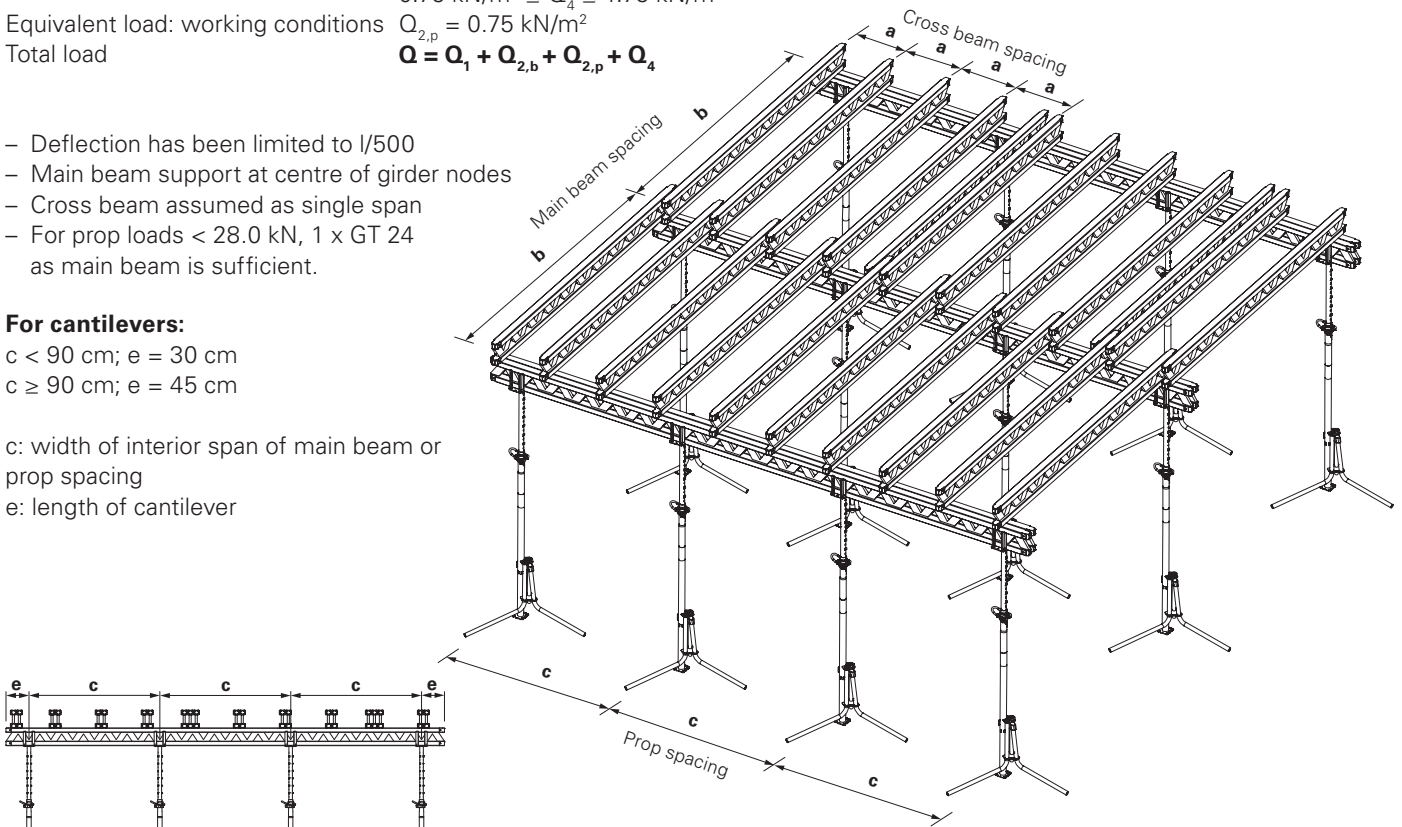
For cantilevers:

$c < 90 \text{ cm}$; $e = 30 \text{ cm}$

$c \geq 90 \text{ cm}$; $e = 45 \text{ cm}$

c: width of interior span of main beam or prop spacing

e: length of cantilever



Cross Beam: VT 20

Main Beam: 2 x VT 20

Slab thickness d [m]		0.10			0.12			0.14			0.16			0.18			0.20			
Load q* [kN/m²]		4.4			4.8			5.3			5.8			6.3			6.8			
Cross beam spacing a [m]		0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	0.75	0.625	0.50	
Cantilever e [m]	0.25	0.50	3.21	3.41	3.67	3.04	3.23	3.48	2.91	3.09	3.33	2.79	2.97	3.20	2.70	2.86	3.09	2.61	2.77	2.99
			7.3	7.8	8.4	7.7	8.2	8.9	8.1	8.6	9.3	8.5	9.1	9.8	8.9	9.5	10.2	9.3	9.9	10.7
	0.375	0.75	3.21	3.41	3.67	3.04	3.23	3.48	2.91	3.09	3.33	2.79	2.97	3.20	2.70	2.86	3.09	2.61	2.77	2.99
			11.0	11.7	12.6	11.6	12.3	13.3	12.2	13.0	14.0	12.8	13.6	14.7	13.4	14.2	15.3	14.0	14.9	16.0
	0.50	1.00	3.21	3.41	3.67	3.04	3.23	3.48	2.91	3.09	3.33	2.79	2.97	3.20	2.70	2.86	3.09	2.61	2.77	2.99
			14.7	15.6	16.8	15.5	16.4	17.7	16.3	17.3	18.6	17.1	18.1	19.5	17.9	19.0	20.4	18.6	19.8	21.3
	0.50	1.25	3.21	3.41	3.67	3.04	3.23	3.48	2.91	3.09	3.33	2.79	2.97	3.20	2.70	2.86	3.09	2.61	2.77	2.99
			18.3	19.5	21.0	19.3	20.5	22.1	20.3	21.6	23.3	21.3	22.7	24.4	22.3	23.7	25.6	23.3	24.8	26.7
	0.50	1.50	3.21	3.41	3.67	3.04	3.23	3.48	2.91	3.09	3.33	2.79	2.97	3.20	2.70	2.86	3.09	2.61	2.77	2.99
			22.0	23.4	25.2	23.2	24.7	26.6	24.4	25.9	27.9	25.6	27.2	29.3	26.8	28.5	30.7	27.9	29.7	32.0
	0.50	1.75	3.21	3.41	3.67	3.04	3.23	3.48	2.91	3.09	3.33	2.79	2.97	3.20	2.70	2.86	3.09	2.61	2.77	2.99
			25.7	27.3	29.4	27.1	28.8	31.0	28.5	30.3	32.6	29.9	31.7	34.2	31.3	33.2	35.8	32.6	34.7	37.3
	0.50	2.00	3.21	3.41	3.67	3.04	3.23	3.48	2.91	3.09	3.33	2.79	2.97	3.20	2.70	2.86	3.09	2.61	2.77	2.99
			29.3	31.2	33.6	30.9	32.9	35.4	32.5	34.6	37.3	34.1	36.3	39.1	35.7	38.0	40.9	37.3	39.6	42.7

Slab thickness d [m]		0.22			0.24			0.25			0.26			0.28			0.30			
Load q* [kN/m²]		7.3			7.8			8.0			8.3			8.8			9.3			
Cross beam spacing a [m]		0.75	0.625	0.50	0.625	0.50	0.40	0.625	0.50	0.40	0.625	0.50	0.40	0.625	0.50	0.40	0.625	0.50	0.40	
Cantilever e [m]	0.25	0.50	2.53	2.69	2.90	2.62	2.82	3.04	2.59	2.79	3.00	2.56	2.75	2.97	2.50	2.69	2.90	2.44	2.63	2.84
			9.7	10.3	11.1	10.7	11.5	12.4	10.9	11.7	12.6	11.1	12.0	12.9	11.5	12.4	13.3	11.9	12.8	13.8
	0.375	0.75	2.53	2.69	2.90	2.62	2.82	3.04	2.59	2.79	3.00	2.56	2.75	2.97	2.50	2.69	2.90	2.44	2.63	2.84
			14.5	15.5	16.7	16.1	17.3	18.6	16.4	17.6	19.0	16.6	17.9	19.3	17.2	18.6	20.0	17.8	19.2	20.7
	0.50	1.00	2.53	2.69	2.90	2.62	2.82	3.04	2.59	2.79	3.00	2.56	2.75	2.97	2.50	2.69	2.90	2.44	2.63	2.84
			19.4	20.6	22.2	21.4	23.1	24.8	21.8	23.5	25.3	22.2	23.9	25.8	23.0	24.7	26.7	23.7	25.6	27.5
	0.50	1.25	2.53	2.69	2.90	2.62	2.82	3.04	2.59	2.79	3.00	2.56	2.75	2.97	2.50	2.69	2.90	2.44	2.63	2.84
			24.2	25.8	27.8	26.8	28.8	31.1	27.3	29.4	31.6	27.7	29.9	32.2	28.7	30.9	33.3	29.7	32.0	34.4
	0.50	1.50	2.53	2.69	2.90	2.62	2.82	3.04	2.59	2.79	3.00	2.56	2.75	2.97	2.50	2.69	2.90	2.44	2.63	2.84
			29.1	30.9	33.3	32.1	34.6	37.3	32.7	35.2	37.9	33.3	35.9	38.6	34.5	37.1	40.0	35.6	38.3	41.3
	0.50	1.75	2.53	2.69	2.90	2.62	2.82	3.04	2.59	2.79	2.98	2.56	2.75	2.90	2.50	2.69	2.73	2.44	2.59	2.59
			33.9	36.1	38.9	37.5	40.4	43.5	38.2	41.1	44.0	38.8	41.8	44.0	40.2	43.3	44.0	41.5	44.0	44.0
	0.50	2.00	2.53	2.69	2.87	2.62	2.69	2.69	2.59	2.61	2.61	2.53	2.53	2.53	2.39	2.39	2.39	2.27	2.27	2.27
			38.8	41.2	44.0	42.8	44.0	44.0	43.6	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0

Cross Beam: VT 20

Main Beam: 2 x VT 20

Slab thickness d [m]		0.35		0.40		0.45		0.50		0.60		0.70		0.80		0.90		1.00		
Load q* [kN/m²]		10.6		11.9		13.3		14.6		17.3		20.0		22.5		25.0		27.4		
Cross beam spacing a [m]		0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	
Cantilever e [m]	0.25	0.50	2.51	2.70	2.40	2.59	2.31	2.49	2.24	2.41	2.11	2.27	2.00	2.16	1.89	2.07	1.76	1.99	1.61	1.91
			13.9	15.0	15.0	16.2	16.1	17.4	17.2	18.5	19.2	20.6	21.0	22.7	22.3	24.4	23.1	26.1	23.1	27.5
	0.375	0.75	2.51	2.70	2.40	2.59	2.31	2.49	2.24	2.41	2.11	2.27	2.00	2.16	1.89	2.07	1.76	1.99	1.61	1.91
			20.9	22.5	22.6	24.3	24.2	26.0	25.7	27.7	28.7	31.0	31.5	34.0	33.4	36.6	34.7	39.1	34.7	41.2
	0.50	1.00	2.51	2.70	2.40	2.59	2.31	2.49	2.24	2.41	2.11	2.27	2.00	2.09	1.86	1.86	1.68	1.68	1.53	1.53
			27.8	30.0	30.1	32.4	32.2	34.7	34.3	37.0	38.3	41.3	42.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
	0.50	1.25	2.51	2.70	2.40	2.59	2.31	2.49	2.24	2.29	1.94	1.94	1.67	1.67	1.49	1.49	1.34	1.34	1.22	1.22
			34.8	37.5	37.6	40.5	40.3	43.4	42.9	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
	0.50	1.50	2.51	2.64	2.34	2.34	2.10	2.10	1.91	1.91	1.61	1.61	1.40	1.40	1.24	1.24	1.12	1.12	1.02	1.02
			41.8	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
	0.50	1.75	2.26	2.26	2.01	2.01	1.80	1.80	1.64	1.64	1.38	1.38	1.20	1.20	1.06	1.06	0.96	0.96	0.87	0.87
			44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
	0.50	2.00	1.98	1.98	1.76	1.76	1.58	1.58	1.43	1.43	1.21	1.21	1.05	1.05	0.93	0.93	0.84	0.84	0.76	0.76
			44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0

Calculation bases:

*Load according to EN 12812

Dead load $Q_1 = 0.40 \text{ kN/m}^2$
 Concrete load $Q_{2,b} = 24.5 \text{ kN/m}^3 \times d \text{ [m]}$
 Equivalent load: concreting $Q_4 = 0.10 \times Q_{2,b}$
 $0.75 \text{ kN/m}^2 \leq Q_4 \leq 1.75 \text{ kN/m}^2$
 Equivalent load: working conditions $Q_{2,p} = 0.75 \text{ kN/m}^2$
 Total load $Q = Q_1 + Q_{2,b} + Q_{2,p} + Q_4$

- Deflection has been limited to $l/500$
- Cross beam assumed as single span
- For prop loads < 22.0 kN, 1 x VT 20 as main beam is sufficient.

For cantilevers:

$c < 75 \text{ cm}$; $e = c/2 \text{ cm}$
 $c \geq 75 \text{ cm}$; $e = 50 \text{ cm}$

c: width of interior span of main beam or prop spacing
 e: length of cantilever

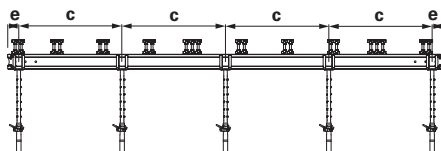
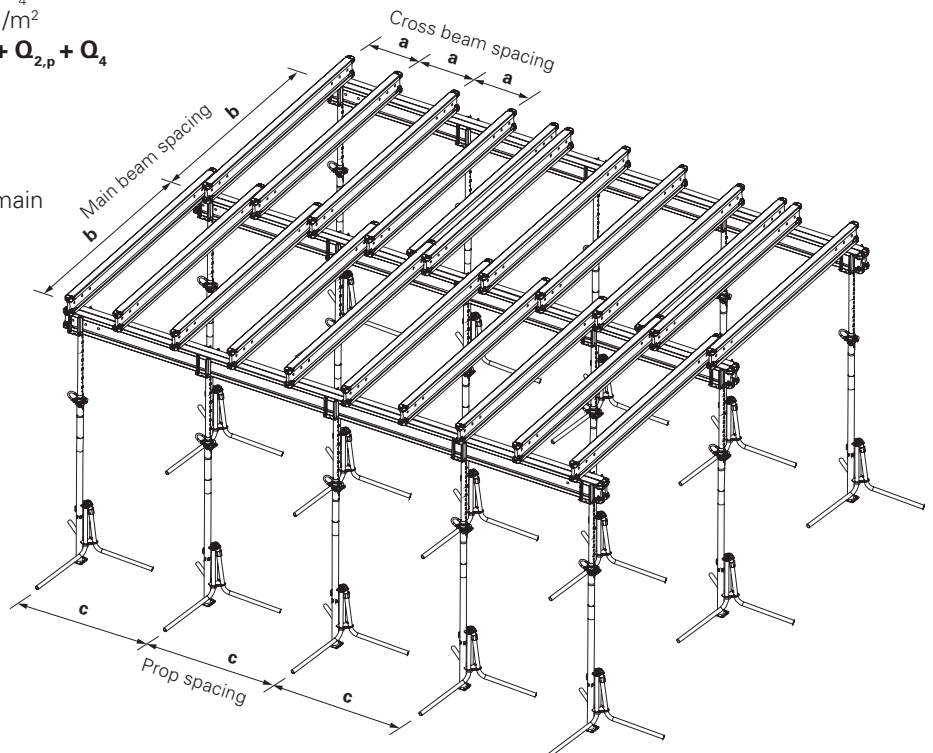


Table values mean the following:

2.61 perm. main beam spacing b [m]

44.0 actual prop load [kN]



Slab Props

PEP Ergo B



Permissible prop load [kN]

Extension length [m]	PEP Ergo B-300		PEP Ergo B-350	
	L = 1.97 – 3.00 m		L = 2.25 – 3.50 m	
	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom
2.00	30.8	30.8		
2.10	29.8	30.8		
2.20	27.0	30.8		
2.30	24.6	30.8	30.8	28.6
2.40	23.0	30.8	28.6	28.6
2.50	21.5	30.8	25.5	28.6
2.60	20.3	29.5	23.1	28.4
2.70	19.3	27.5	21.3	28.0
2.80	18.3	24.8	19.8	27.4
2.90	16.9	22.3	18.6	26.1
3.00	15.6	20.2	17.5	24.4
3.10			16.3	22.8
3.20			15.2	20.8
3.30			14.3	19.0
3.40			13.2	17.4
3.50			12.4	15.7

Note:

- PERI PEP Ergo B-300 and PEP Ergo B-350 Props meet the load-bearing capacity requirements of Prop Class B as stipulated in DIN EN 1065.
- General Building Inspectorate Approval Z-8.311-934 is issued by the German Institute for Building Technology (DIBt).

Slab Props

PEP Ergo B with Base MP 50

Permissible prop load [kN]

Overall height [m] (prop extension + 50 cm)	PEP Ergo B-300 L = 1.97 – 3.00 m		PEP Ergo B-350 L = 2.25 – 3.50 m	
	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom
2.50	30.8	30.8		
2.60	29.3	30.8		
2.70	26.3	30.8		
2.80	23.8	30.8	30.8	30.5
2.90	21.8	30.8	28.1	30.2
3.00	20.4	28.3	25.0	29.6
3.10	19.2	25.1	22.4	28.9
3.20	18.1	22.5	20.6	27.5
3.30	16.9	20.4	19.0	25.0
3.40	15.6	18.6	17.7	22.6
3.50	14.3	16.9	16.5	20.5
3.60			15.2	18.7
3.70			14.1	16.9
3.80			13.1	15.0
3.90			12.2	13.4
4.00			11.2	11.9

Slab Props

PEP Ergo D

Permissible prop load [kN]

Extension length [m]	PEP Ergo D-150 L = 0.98 – 1.50 m		PEP Ergo D-250 L = 1.47 – 2.50 m		PEP Ergo D-300 + L = 1.79 – 3.00 m	
	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom
1.00	30.8	30.8				
1.10	30.8	30.8				
1.20	30.8	30.8				
1.30	30.8	30.8				
1.40	28.5	30.8				
1.50	26.4	30.8	35.0	35.0		
1.60			35.0	35.0		
1.70			32.9	35.0		
1.80			30.7	35.0	35.0	35.0
1.90			29.1	35.0	35.0	35.0
2.00			28.1	35.0	35.0	35.0
2.10			27.3	35.0	35.0	35.0
2.20			26.5	34.1	35.0	35.0
2.30			25.7	32.3	33.5	35.0
2.40			24.3	29.4	31.5	34.0
2.50			22.4	26.3	30.2	32.8
2.60					28.3	31.4
2.70					26.2	29.2
2.80					24.2	26.9
2.90					22.4	24.9
3.00					20.6	22.7

Note:

- PERI PEP Ergo D-150, PEP Ergo D-250, PEP Ergo D-350, PEP Ergo D-400 and PEP Ergo D-500 Props fulfil Prop Class D load-bearing capacity requirements of DIN EN 1065.
- In addition, Prop PEP Ergo D-250 fulfils the Prop Class B requirements as stipulated in DIN EN 1065.
- General Building Inspectorate Approval Z-8.311-934 for PERI PEP Ergo D-150, PEP Ergo D-250 and PEP Ergo D-300 +.
- General Building Inspectorate Approval Z-8.311-941 for PERI PEP Ergo D-350 +, PEP Ergo D-400 and PEP Ergo D-500.

Slab Props

PEP Ergo D

Permissible prop load [kN]

Extension length [m]	PEP Ergo D-350 + L = 2.08 – 3.50 m		PEP Ergo D-400 L = 2.51 – 4.00 m		PEP Ergo D-500 L = 3.26 – 5.00 m	
	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom
2.10	40.0	40.0				
2.20	40.0	40.0				
2.30	40.0	40.0				
2.40	39.7	40.0				
2.50	36.9	40.0				
2.60	34.7	40.0	40.0	40.0		
2.70	32.9	40.0	40.0	40.0		
2.80	31.6	40.0	40.0	40.0		
2.90	30.3	40.0	40.0	40.0		
3.00	29.2	39.1	40.0	40.0		
3.10	27.2	35.4	37.7	40.0		
3.20	25.4	32.1	35.7	40.0		
3.30	23.7	29.4	33.9	40.0	40.0	40.0
3.40	22.1	27.0	32.5	40.0	40.0	40.0
3.50	20.7	24.7	31.0	39.7	40.0	40.0
3.60			29.0	36.4	40.0	40.0
3.70			27.0	33.3	40.0	40.0
3.80			25.2	30.7	40.0	40.0
3.90			23.5	28.2	40.0	40.0
4.00			21.8	26.0	40.0	40.0
4.10					39.3	40.0
4.20					36.5	40.0
4.30					34.0	39.2
4.40					31.8	37.0
4.50					29.9	34.6
4.60					28.1	32.4
4.70					26.4	30.4
4.80					24.8	28.5
4.90					23.4	26.8
5.00					21.8	25.3

Note:

- PERI PEP Ergo D-150, PEP Ergo D-250, PEP Ergo D-350, PEP Ergo D-400 and PEP Ergo D-500 Props fulfil Prop Class D load-bearing capacity requirements of DIN EN 1065.
- In addition, Prop PEP Ergo D-250 fulfils the Prop Class B requirements as stipulated in DIN EN 1065.
- General Building Inspectorate Approval Z-8.311-934 for PERI PEP Ergo D-150, PEP Ergo D-250 and PEP Ergo D-300 +.
- General Building Inspectorate Approval Z-8.311-941 for PERI PEP Ergo D-350 +, PEP Ergo D-400 and PEP Ergo D-500.

Slab Props

PEP Ergo E



Permissible prop load [kN]

Extension length [m]	PEP Ergo E-300 + L = 1.79 – 3.00 m		PEP Ergo E-350 + L = 2.08 – 3.50 m		PEP Ergo E-400 L = 2.51 – 4.00 m	
	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom
1.80	50.4	50.4				
1.90	50.4	50.4				
2.00	50.4	50.4				
2.10	50.4	50.4	50.4	50.4		
2.20	50.4	50.4	50.4	50.4		
2.30	50.4	50.4	50.4	50.4		
2.40	47.3	50.4	50.4	50.4		
2.50	45.6	50.4	50.4	50.4		
2.60	44.5	50.4	50.4	50.4	50.4	50.4
2.70	43.3	50.4	48.5	50.4	50.4	50.4
2.80	41.8	50.4	46.4	50.4	50.4	50.4
2.90	40.3	48.0	44.5	50.4	50.4	50.4
3.00	37.5	43.0	43.0	50.4	50.4	50.4
3.10			41.5	50.4	50.4	50.4
3.20			38.7	46.1	50.4	50.4
3.30			36.0	41.9	50.4	50.4
3.40			33.3	38.2	50.4	50.4
3.50			30.9	34.9	48.5	50.4
3.60					46.0	50.4
3.70					42.7	48.4
3.80					39.7	44.7
3.90					36.9	41.1
4.00					34.1	37.7

Note:

- PERI Props PEP Ergo E-300 +, PEP Ergo D-350 + and PEP Ergo E-400 fulfil the Prop Class E load-bearing capacity requirements of DIN EN 1065.
- General Building Inspectorate Approval Z-8.311-941 of the German Institute for Building Technology (DIBt).

Slab Props

PEP Alpha D

Permissible prop load [kN]

Length in mm	PEP Alpha D-300		PEP Alpha D-350	
	Outer tube bottom F _{max} (kN)	Inner tube bottom F _{max} (kN)	Outer tube bottom F _{max} (kN)	Inner tube bottom F _{max} (kN)
1700	36.1	36.1		
1800	36.1	36.1		
1900	36.1	36.1		
2000	36.1	36.1	36.1	36.1
2100	35.6	36.1	36.1	36.1
2200	33.8	36.1	36.1	36.1
2300	32.1	36.1	36.1	36.1
2400	30.9	36.1	36.1	36.1
2500	29.7	35.2	36.1	36.1
2600	27.5	33.2	35.6	36.1
2700	25.5	30.6	33.9	36.1
2800	23.6	28.1	32.7	36.1
2900	21.9	25.8	31.2	36.1
3000	20.6	23.5	29.1	36.1
3100			27.3	34.2
3200			25.5	31.4
3300			23.7	28.7
3400			22.1	26.3
3500			20.6	24.2



PERI PEP Alpha D-300 und PEP Alpha D-350 Props fulfil the load-bearing capacity requirements of DIN EN 1065.

Slab Props

PEP 20



Permissible prop load [kN]

Extension length [m]	PEP 20 N 260*		PEP 20-300		PEP 20-350		PEP 20-400		PEP 20-500	
	L = 1.51 – 2.60 m		L = 1.71 – 3.00 m		L = 1.96 – 3.50 m		L = 2.21 – 4.00 m		L = 2.71 – 5.00 m	
	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom
1.60	35.0	35.0								
1.70	35.0	35.0								
1.80	35.0	35.0	36.4	36.4						
1.90	35.0	35.0	36.4	36.4						
2.00	33.5	35.0	36.1	36.4	36.4	36.4				
2.10	31.9	35.0	33.2	36.4	36.4	36.4				
2.20	30.9	35.0	31.4	36.4	36.4	36.4				
2.30	29.8	35.0	29.9	36.4	36.4	36.4	36.4	36.4		
2.40	28.6	35.0	28.7	36.4	36.4	36.4	36.4	36.4		
2.50	27.1	32.9	27.7	36.4	36.4	36.4	36.4	36.4		
2.60	24.8	29.4	26.9	36.3	34.8	36.4	36.4	36.4		
2.70			25.7	32.7	33.4	36.4	36.4	36.4		
2.80			24.0	29.3	32.1	36.4	36.4	36.4	36.4	36.4
2.90			22.3	26.5	31.1	36.4	36.4	36.4	36.4	36.4
3.00			20.5	23.9	30.1	36.4	36.4	36.4	36.4	36.4
3.10					28.3	35.7	34.6	36.4	36.4	36.4
3.20					26.5	32.5	33.5	36.4	36.4	36.4
3.30					24.8	29.7	32.1	36.4	36.4	36.4
3.40					23.1	27.2	30.5	36.4	36.4	36.4
3.50					21.3	24.8	28.7	34.9	36.4	36.4
3.60							26.9	32.1	36.4	36.4
3.70							25.3	29.8	36.4	36.4
3.80							23.7	27.6	36.4	36.4
3.90							22.3	25.5	36.4	36.4
4.00							20.7	23.5	35.3	36.4
4.10									33.3	36.4
4.20									31.5	36.4
4.30									29.8	35.0
4.40									28.2	32.9
4.50									26.8	30.8
4.60									25.3	28.9
4.70									24.1	27.2
4.80									22.8	25.7
4.90									21.5	24.1
5.00									20.3	22.1

All PEP 20 Props correspond to Class D of DIN EN 1065, i. e. the permissible load for all extension lengths is a minimum of 20 kN.

When using PERI Slab Tables, the permissible load for all PEP 20 Props is a minimum of 30 kN over the entire extension lengths due to the clamping in the Table Swivel Head or UNIportal Head.

*For the N Props, the inner tube at the bottom can only be used in connection with PERI Slab Tables or SKYDECK (bolted head).

Slab Props

PEP 20 with Base MP 50



Permissible prop load [kN]

Overall height [m] (prop extension + 50 cm)	PEP 20 N 260*		PEP 20-300		PEP 20-350		PEP 20-400		PEP 20-500	
	L = 1.51 – 2.60 m		L = 1.71 – 3.00 m		L = 1.96 – 3.50 m		L = 2.21 – 4.00 m		L = 2.71 – 5.00 m	
	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom
2.10	36.4	36.4								
2.20	36.4	36.4								
2.30	36.4	36.4	36.4	36.4						
2.40	34.2	36.4	36.4	36.4						
2.50	31.9	36.4	34.9	36.4	36.4	36.4				
2.60	30.4	36.4	31.8	36.4	36.4	36.4				
2.70	28.7	36.4	29.6	36.4	36.4	36.4				
2.80	27.3	34.7	27.8	36.4	36.4	36.4	36.4	36.4		
2.90	26.3	30.7	26.4	35.8	36.4	36.4	36.4	36.4		
3.00	24.5	27.5	25.2	32.1	35.0	36.4	36.4	36.4		
3.10	22.2	24.7	24.2	28.8	32.9	36.4	36.4	36.4		
3.20			23.1	26.3	31.1	36.4	36.4	36.4		
3.30			21.4	23.9	29.7	36.4	36.4	36.4	36.4	36.4
3.40			19.9	21.8	28.4	34.2	35.7	36.4	36.4	36.4
3.50			18.1	19.8	27.0	30.7	33.9	36.4	36.4	36.4
3.60					25.3	28.6	32.3	36.4	36.4	36.4
3.70					23.6	26.1	30.8	35.3	36.4	36.4
3.80					22.0	24.2	29.1	32.7	36.4	36.4
3.90					20.4	22.5	27.3	30.0	36.4	36.4
4.00					18.9	20.7	25.5	27.8	36.4	36.4
4.10							23.9	26.1	36.4	36.4
4.20							22.4	24.2	36.4	36.4
4.30							21.0	22.8	35.6	36.4
4.40							19.7	21.2	33.6	36.4
4.50							18.3	19.7	31.6	34.2
4.60									29.3	32.1
4.70									28.0	30.0
4.80									26.5	28.4
4.90									25.1	26.8
5.00									23.8	25.4
5.10									22.6	24.0
5.20									21.4	22.7
5.30									20.3	21.6
5.40									19.1	20.4
5.50									18.1	19.1

*For the N Props, the inner tube at the bottom can only be used in connection with PERI Slab Tables or SKYDECK (bolted head).

Slab Props

PEP 30



Permissible prop load [kN]

Extension length [m]	PEP 30-150 L = 0.96 – 1.50 m		PEP 30-250 L = 1.46 – 2.50 m		PEP 30-300 L = 1.71 – 3.00 m		PEP 30-350 L = 1.96 – 3.50 m		PEP 30-400 L = 2.21 – 4.00 m	
	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom
1.00	36.4	36.4								
1.10	36.4	36.4								
1.20	36.4	36.4								
1.30	35.9	36.4								
1.40	35.3	36.4								
1.50	34.5	36.4	42.9	42.9						
1.60			42.9	42.9						
1.70			42.9	42.9						
1.80			42.1	42.9	42.9	42.9				
1.90			39.7	42.9	42.9	42.9				
2.00			37.9	42.9	42.9	42.9	45.5	45.5		
2.10			36.4	42.9	42.9	42.9	45.5	45.5		
2.20			35.5	42.9	42.9	42.9	45.5	45.5		
2.30			34.3	41.5	42.9	42.9	45.5	45.5	41.5	41.5
2.40			33.1	38.7	42.7	42.9	45.5	45.5	41.5	41.5
2.50			31.0	35.9	41.1	42.9	45.5	45.5	41.5	41.5
2.60					40.0	42.9	45.5	45.5	41.5	41.5
2.70					38.5	42.9	45.5	45.5	41.5	41.5
2.80					36.9	41.6	45.5	45.5	41.5	41.5
2.90					34.2	38.3	45.0	45.5	41.5	41.5
3.00					31.3	34.8	43.6	45.5	41.5	41.5
3.10							41.4	44.2	41.5	41.5
3.20							38.7	42.1	41.5	41.5
3.30							36.1	38.7	41.5	41.5
3.40							33.3	35.7	41.5	41.5
3.50							30.7	32.5	41.5	41.5
3.60									41.5	41.5
3.70									41.3	41.5
3.80									38.5	41.3
3.90									35.9	38.1
4.00									33.2	34.9

All PEP 30 Props correspond to Class E of DIN EN 1065, i. e. the permissible load for all extension lengths is a minimum of 30 kN.

When using PERI Slab Tables, the permissible load for all PEP 30 Props is a minimum of 40 kN (PEP 30-150 = 35 kN) over the entire extension lengths due to the clamping in the Table Swivel Head or UNIportal Head.

Slab Props

PEP 30 with Base MP 50

Permissible prop load [kN]

Overall height [m] (prop extension + 50 cm)	PEP 30-250 L = 1.46 – 2.50 m		PEP 30-300 L = 1.71 – 3.00 m		PEP 30-350 L = 1.96 – 3.50 m		PEP 30-400 L = 2.21 – 4.00 m	
	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom
2.00	42.9	42.9						
2.10	42.9	42.9						
2.20	42.9	42.9						
2.30	40.1	42.9	42.9	42.9				
2.40	37.2	42.9	42.9	42.9				
2.50	35.0	42.9	42.9	42.9	45.4	45.4		
2.60	33.2	42.3	42.9	42.9	45.4	45.4		
2.70	31.8	39.8	42.9	42.9	45.4	45.4		
2.80	30.6	36.4	41.6	42.9	45.4	45.4	41.5	41.5
2.90	28.4	32.3	39.5	42.9	45.4	45.4	41.5	41.5
3.00	26.7	28.5	37.6	42.5	45.4	45.4	41.5	41.5
3.10			36.2	41.2	45.4	45.4	41.5	41.5
3.20			33.9	37.9	45.1	45.4	41.5	41.5
3.30			32.1	34.2	43.0	45.4	41.5	41.5
3.40			29.4	31.2	40.0	43.0	41.5	41.5
3.50			26.9	27.9	38.2	40.9	41.5	41.5
3.60					35.8	37.6	41.5	41.5
3.70					33.4	34.5	41.5	41.5
3.80					30.9	31.8	41.5	41.5
3.90					28.6	29.6	43.1	41.5
4.00					26.3	27.1	40.6	42.1
4.10							37.8	39.1
4.20							35.3	36.2
4.30							33.0	33.9
4.40							30.8	31.4
4.50							28.4	29.0

Slab Props

MULTIPROP 250, 350, 480, 625



Permissible prop load [kN]

Extension length [m]	MP 250 L = 1.45 – 2.50 m		MP 350 L = 1.95 – 3.50 m		MP 480 L = 2.60 – 4.80 m		MP 625 L = 4.30 – 6.25 m	
	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom
1.45	75.5	78.5						
1.50	75.5	78.5						
1.60	75.5	78.5						
1.70	75.5	78.5						
1.80	73.8	78.5						
1.90	70.6	78.5						
1.95	68.0	78.5	91.0	90.1				
2.00	67.3	78.5	91.0	90.1				
2.10	65.7	76.8	86.0	90.1				
2.20	64.1	75.1	80.6	90.1				
2.30	62.5	72.6	75.1	89.8				
2.40	60.8	69.1	70.7	87.9				
2.50	59.2	65.6	66.4	86.1				
2.60			63.7	83.1	88.5	73.6		
2.70			61.1	80.1	83.7	73.3		
2.80			59.2	77.1	78.8	72.9		
2.90			57.4	74.1	74.0	72.6		
3.00			56.0	70.3	69.1	72.2		
3.10			54.5	66.6	64.9	71.4		
3.20			52.9	61.8	60.7	70.7		
3.30			51.3	57.1	56.5	70.0		
3.40			47.7	51.7	54.1	68.2		
3.50			44.2	46.4	51.8	66.5		
3.60					49.4	64.7		
3.70					47.5	60.4		
3.80					45.7	56.1		
3.90					43.8	51.8		
4.00					41.8	48.4		
4.10					39.7	45.0		
4.20					37.7	41.6		
4.30					35.8	39.3	57.9	45.7
4.40					33.9	37.0	56.3	45.7
4.50					32.0	34.8	54.7	45.7
4.60					30.2	32.5	52.5	45.1
4.70					28.3	30.2	50.3	44.4
4.80					26.4	27.9	47.9	43.5
4.90							45.2	42.4
5.00							42.5	41.3
5.10							39.9	39.9
5.20							37.2	38.5
5.30							34.9	37.1
5.40							32.8	35.6
5.50							30.8	34.1
5.60							29.3	32.6
5.70							27.8	31.2
5.80							26.4	29.6
5.90							25.1	27.9
6.00							23.8	26.2
6.10							22.7	24.8
6.20							21.6	23.4
6.25							21.0	22.7

MULTIPROP Props are classified according to official approval as follows:

MP 250 Class T 25 MP 480 Class D 45

MP 350 Class R 35 MP 625 Class D 60

Note:

To release the loads > 60 kN, we recommend using the HD Wingnut Spanner, Item no. 022027.

When using PERI Slab Tables, the permissible load of the MULTIPROP MP 350 Prop is a minimum of 56 kN and a minimum of 36 kN for the MP 480 over the entire extension length which is due to the clamping in the Table Swivel Head or UNIportal Head.

Slab Props

MULTIPROP 250, 350, 480, 625 with Base MP 50

Permissible prop load [kN]

Overall height [m] (prop extension + 50 cm)	MP 250 + MP 50 L = 1.95 – 3.00 m		MP 350 + MP 50 L = 2.45 – 4.00 m		MP 480 + MP 50 L = 3.10 – 5.30 m		MP 625 + MP 50 L = 4.80 – 6.75 m	
	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom	Outer tube bottom	Inner tube bottom
2.25	76.6	73.6						
2.30	74.5	72.9						
2.40	72.4	72.1						
2.50	66.1	69.8	87.6	84.2				
2.60	63.3	67.7	83.8	82.9				
2.70	60.5	65.6	79.9	81.7				
2.80	57.7	63.1	76.1	80.5				
2.90	55.1	60.1	70.0	77.0				
3.00	52.4	57.1	63.9	73.5				
3.10			60.8	70.6	76.8	73.3		
3.20			57.6	67.6	74.4	72.8		
3.30			55.2	64.7	71.9	72.3		
3.40			52.7	61.8	69.4	71.8		
3.50			50.8	59.1	67.0	71.3		
3.60			48.8	56.4	62.6	70.0		
3.70			46.9	52.2	58.2	68.7		
3.80			45.0	48.0	53.9	67.4		
3.90			41.8	43.9	51.2	62.9		
4.00			38.5	39.8	48.6	58.4		
4.10					45.9	53.9		
4.20					43.9	50.1		
4.30					41.9	46.3		
4.40					39.8	42.5		
4.50					37.7	40.0		
4.60					35.5	37.5		
4.70					33.3	35.0		
4.80					31.7	33.2	48.7	44.5
4.90					30.0	31.4	47.5	44.4
5.00					28.4	29.6	46.2	44.3
5.10					26.7	27.8	44.5	43.1
5.20					25.1	26.0	42.8	41.8
5.30					23.4	24.2	41.1	40.4
5.40							40.1	39.6
5.50							37.3	37.2
5.60							35.3	35.6
5.70							33.3	34.0
5.80							31.5	32.5
5.90							30.6	31.7
6.00	Note: To release the loads > 60 kN, we recommend using the HD Wingnut Spanner, Item no. 022027.						28.1	29.5
6.10							26.7	28.1
6.20							25.3	26.7
6.30							24.1	25.4
6.40							23.5	24.8
6.50							21.8	22.9
6.60							20.8	21.7
6.70							19.8	20.6
6.75							19.3	20.0

Beams

Beam Formwork UZ

**Permissible width of influence EB [m]
for UZ Beam Bracket 40 depending
on the beam depth and slab thick-
ness**

Slab thickness d [m]	Beam depth h [m]											
	0.30		0.40		0.50		0.60		0.70		0.80	
	Version		Version		Version		Version		Version		Version	
	1 1 x GT 24	2 2 x VT 20	1 1 x GT 24	2 2 x VT 20	1 2 x GT 24	2 2 x VT 20	1 2 x GT 24	2 2 x VT 20	1 2 x GT 24	2 3 x VT 20	1 2 x GT 24	2 3 x VT 20
0	2.01	4.21	1.74	3.59	1.57	3.14	1.45	2.80	1.36	2.60	*1.29	*1.85
0.20	2.05	4.56	1.91	3.30	1.77	2.69	1.64	1.95	*1.35	*1.42	*1.02	*1.07
0.25	1.83	4.00	1.71	2.51	1.62	2.36	1.55	1.77	*1.23	*1.29	*0.94	*0.98
0.30	1.77	3.58	1.66	2.34	1.58	2.10	1.51	1.61	*1.13	*1.19	*0.86	*0.90
0.35	1.71	3.30	1.62	2.06	1.54	1.88	1.40	1.45	*1.04	*1.09	*0.77	*0.83

The above values relate to the load-bearing capacity of the UZ Beam Bracket 40, the vertical 8 x 8 cm timber and the cross beams as they are shown on the drawings.

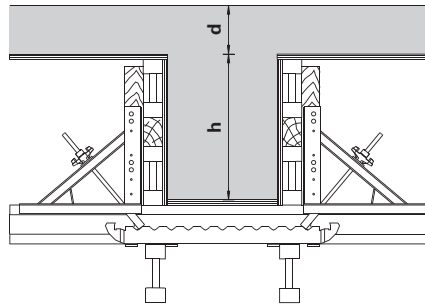
Depending on the formlining used, additional cross beams may be needed.

Separate structural calculations must be provided to show that the sub-structure can carry all resulting loads.

The equivalent load (V/100) acting horizontally and the pressures arising on one side (e.g. the edge beam) are to be accommodated by suitable means provided by the contractor.

Version 1:

Side form with 1 or 2 GT 24 girders (vertical)

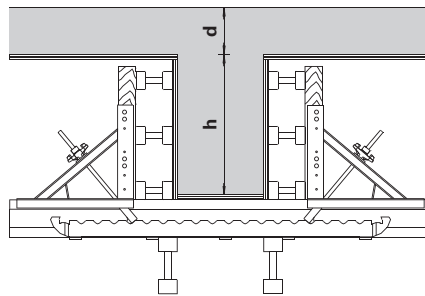


The max. deflection is $l/500$

*) vertical timber in the UZ Beam Bracket 40 10 x 8 cm! (instead of 8 x 8 cm)

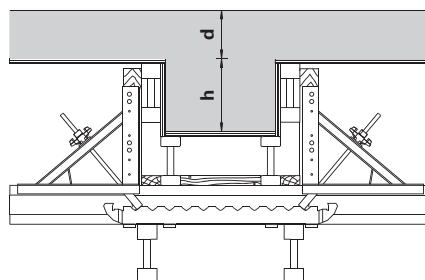
Version 2:

Side form with 2 or 3 VT 20 girders (horizontal)



Version 3:

Packing of the beam soffit form



d = slab thickness
h = beam depth

Beams

Stopend Angle AW

Permissible width of influence [m]
for Stopend Angle AW depending
on the slab thickness, beam depth
and type of fixing

		Height of side formwork h [m]															
		0.20				0.25				0.30				0.35			
		nailed on		clamped		nailed on		clamped		nailed on		clamped		nailed on		clamped	
Sub-structure		SKYDECK*	Formlin- ing 21 mm	Timber girder	Timber girder	SKYDECK*	Formlin- ing 21 mm	Timber girder	Timber girder	SKYDECK*	Formlin- ing 21 mm	Timber girder	Timber girder	SKYDECK*	Formlin- ing 21 mm	Timber girder	Timber girder
Slab thickness d [m]	0	3.27	3.27	3.27	3.27	2.82	2.86	2.86	2.86	1.63	2.60	2.60	2.60	0.97	2.21	1.69	1.90
	0.20	1.19	2.75	2.05	1.88	0.71	1.64	1.24	1.32	0.45	1.02	0.79	0.99	-	0.69	0.54	0.76
	0.25	1.07	2.46	1.84	1.63	0.61	1.39	1.06	1.16	0.39	0.88	0.68	0.87	-	0.60	0.47	0.67
	0.30	0.93	2.15	1.61	1.43	0.54	1.23	0.94	1.03	-	0.77	0.60	0.78	-	0.53	0.41	0.60
	0.35	0.82	1.89	1.41	1.28	0.47	1.08	0.83	0.92	-	0.69	0.53	0.69	-	0.47	-	0.54
	0.40	0.73	1.69	1.26	1.14	0.42	0.96	0.73	0.83	-	0.62	0.48	0.63	-	0.42	-	0.49

		Height of side formwork h [m]											
		0.40				0.50				0.60			
		nailed on		clamped		nailed on		clamped		nailed on		clamped	
Sub-structure		SKYDECK*	Formlin- ing 21 mm	Timber girder	Timber girder	SKYDECK*	Formlin- ing 21 mm	Timber girder	Timber girder	SKYDECK*	Formlin- ing 21 mm	Timber girder	Timber girder
Slab thickness d [m]	0	0.62	1.41	1.09	1.40	-	0.68	0.53	0.83	-	-	-	0.54
	0.20	-	0.49	-	0.60	-	-	-	0.40	-	-	-	-
	0.25	-	0.43	-	0.53	-	-	-	-	-	-	-	-
	0.30	-	-	-	0.48	-	-	-	-	-	-	-	-
	0.35	-	-	-	0.44	-	-	-	-	-	-	-	-
	0.40	-	-	-	0.40	-	-	-	-	-	-	-	-

- Nail with 8 nails Ø 3.1 mm (6 at the front and 2 at the back)

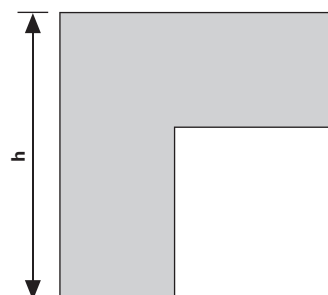
* Using the Guardrail Post AW on SKYDECK panels is not permissible.

Separate structural calculations must be provided to show that the sub-structure can carry all resulting loads. The equivalent load (V/100) acting horizontally and the pressures arising on one side (e.g. the edge beam) are to be accommodated by suitable means provided by the contractor.

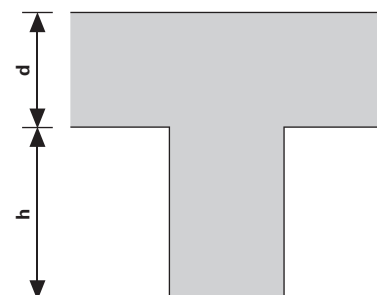
1. Stopend for slab formwork



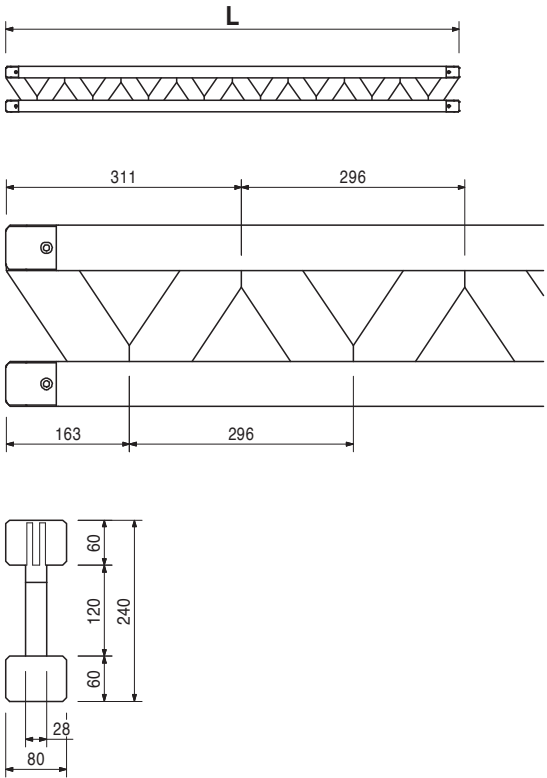
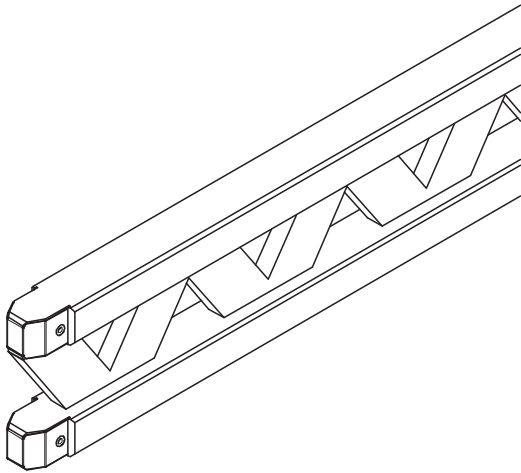
2. Slab with Edge Beam



3. Slab with T-Beam



Item no.	Weight kg		L
075100	5.300	Girders GT 24	918
075120	7.100	Girder GT 24, l = 0.90 m	1214
075150	8.900	Girder GT 24, l = 1.20 m	1510
075180	10.600	Girder GT 24, l = 1.50 m	1806
075210	12.400	Girder GT 24, l = 1.80 m	2102
075240	14.200	Girder GT 24, l = 2.10 m	2398
075270	15.900	Girder GT 24, l = 2.40 m	2694
075300	17.700	Girder GT 24, l = 2.70 m	2990
075330	19.500	Girder GT 24, l = 3.00 m	3286
075360	21.200	Girder GT 24, l = 3.30 m	3582
075390	23.000	Girder GT 24, l = 3.60 m	3878
075420	24.800	Girder GT 24, l = 3.90 m	4174
075450	26.600	Girder GT 24, l = 4.20 m	4470
075480	28.300	Girder GT 24, l = 4.50 m	4766
075510	30.100	Girder GT 24, l = 4.80 m	5062
075540	31.900	Girder GT 24, l = 5.10 m	5358
075570	33.600	Girder GT 24, l = 5.40 m	5654
075600	35.400	Girder GT 24, l = 5.70 m	5950



Item no.	Weight kg
074990	8.600
074905	12.700
074910	14.500
074890	15.600
074920	17.100
074930	19.500
074940	21.200
074950	23.000
074960	26.700
074970	29.900
074980	34.800

Girders VT 20K with Steel Cap

Girder VT 20K, l = 1.45 m

Girder VT 20K, l = 2.15 m

Girder VT 20K, l = 2.45 m

Girder VT 20K, l = 2.65 m

Girder VT 20K, l = 2.90 m

Girder VT 20K, l = 3.30 m

Girder VT 20K, l = 3.60 m

Girder VT 20K, l = 3.90 m

Girder VT 20K, l = 4.50 m

Girder VT 20K, l = 4.90 m

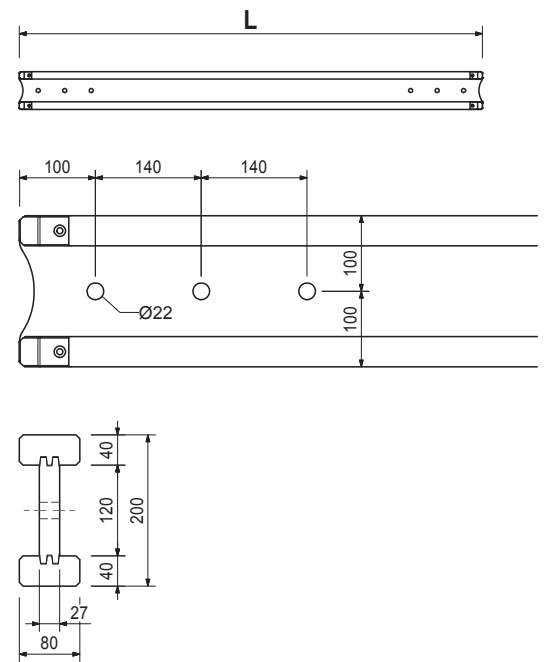
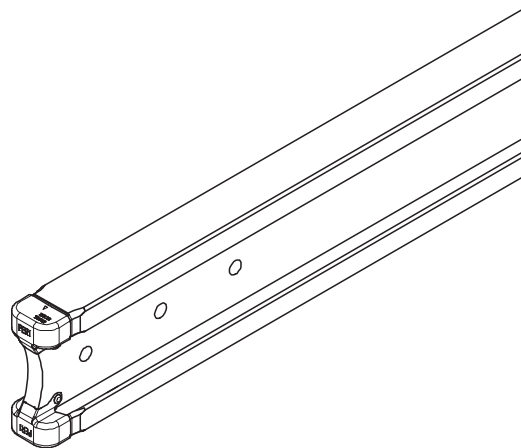
Girder VT 20K, l = 5.90 m

Universal formwork girder made of wood.

L
1445
2150
2450
2650
2900
3290
3590
3890
4490
4900
5900

Note

The girder fulfils all requirements of DIN EN 13377 class P20 (Declaration of Conformity).



028870	5.430
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Lowering Head 20/24, galv.

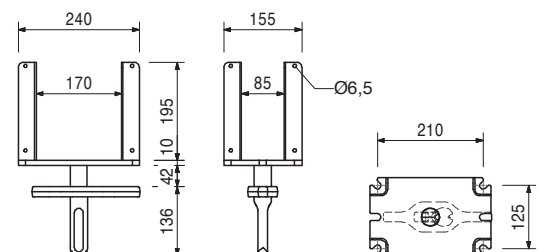
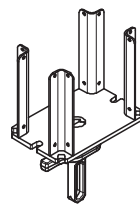
For tilt-resistant support of one or two GT 24 or VT 20 Girders.

Lowering range 4 cm.

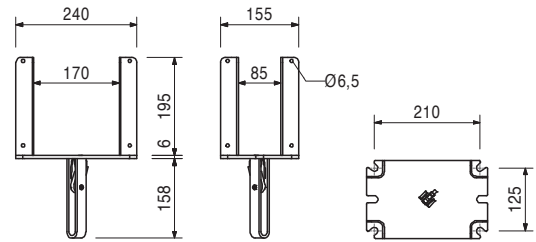
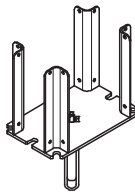
Note

Required hole diameter of the prop end plate Ø 40 mm.

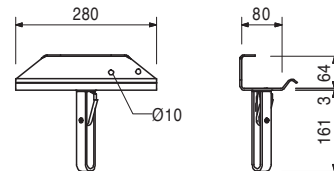
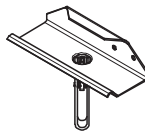
Girder overlap on both sides minimum 16.3 cm for GT 24 and 15 cm for VT 20.



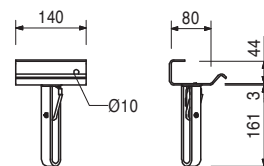
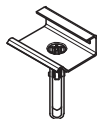
Item no.	Weight kg		
028680	3.190	Crossheads 20/24, galv.	Note
027890	3.080	Crosshead 20/24 S, galv.	Required hole diameter of the prop end plate Ø 40 mm.
		Crosshead 20/24, galv.	Girder overlap on both sides minimum 16.3 cm for GT 24 and 15 cm for VT 20.
		With or without self-locking coupling. For tilt-resistant support of one or two GT 24 or VT 20 Girders.	



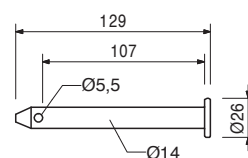
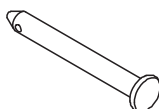
028890	1.650	Clawheads 24, galv.	Note
028880	1.540	Clawhead 24 S, galv.	Required hole diameter of the prop end plate Ø 40 mm.
		Clawhead 24, galv.	
		With or without self-locking coupling. For posi- tioning intermediate props on the GT 24 Girder without nailing.	



028660	1.040	Clawheads 16/20, galv.	Note
028670	0.936	Clawhead 16/20 S, galv.	Required hole diameter of the prop end plate Ø 40 mm.
		Clawhead 16/20, galv.	
		With or without self-locking coupling. For positioning intermediate props on the VT 20 girder without nailing.	



027990	0.150	Bolt Ø 14 x 107, galv.	
		For different connections.	



018060	0.014	Accessories	
		Cotter Pin 4/1, galv.	

Item no.	Weight kg
018060	0.014

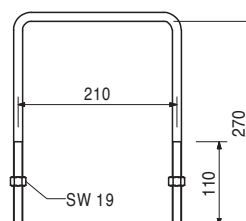
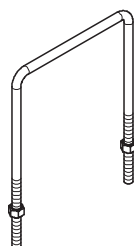
Cotter Pin 4/1, galv.



028590	0.568
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Tension Strap 16-25, galv.

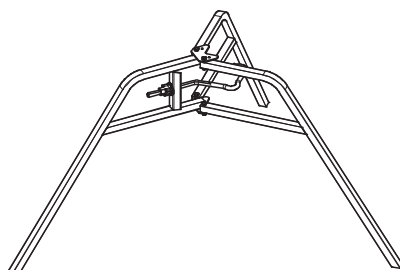
For mounting 2 GT 24 or VT 20 Girders on the Cross Forkhead and Head Spindle TR 38 and on the Crosshead 20/24 or 20/24S.



028000	9.190
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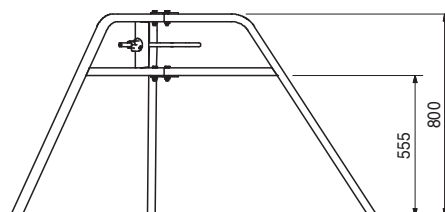
Universal Tripod, galv.

Erection aid for slab props with $\varnothing$ 57 – 120 mm and 120 x 120 mm. Can also be used in combination with MULTIPROP MP Slab Props and all slab props with Base MP 50.



Note

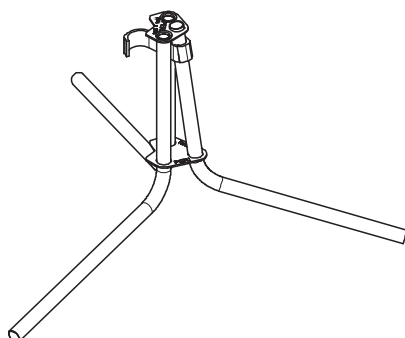
Only use as erection aid!



107152	5.810
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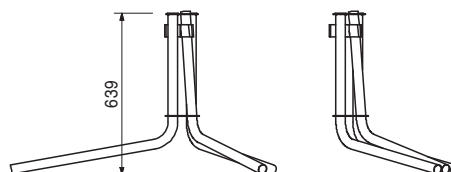
Tripod PEP Ergo, galv.

Erection aid for PEP Ergo Slab Props with $\varnothing$ 44 – 64 mm.



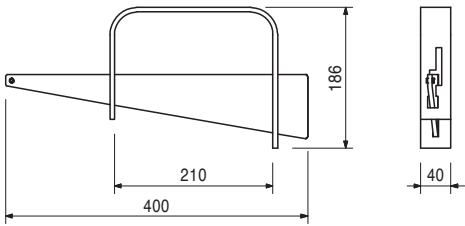
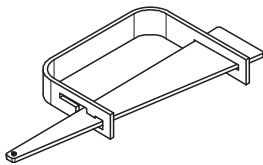
Note

Only use as erection aid!



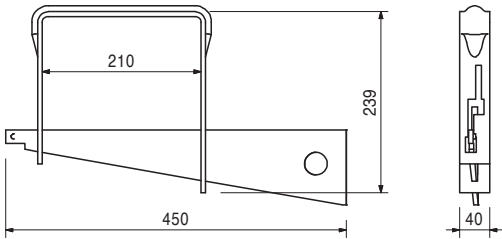
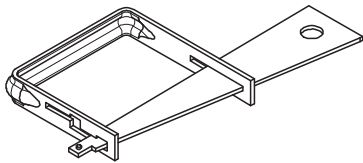
Item no.	Weight kg
027940	1.840

Brace Clamp, galv., 48 – 76 mm
For assembly of 3 x 15 cm stiffening boards at slab props Ø 48 – 76 mm.



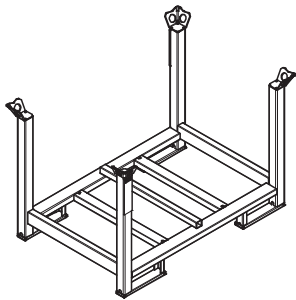
027790	2.460
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Brace Clamp HL, galv., 76 – 120 mm
For assembly of 3 x 15 cm stiffening boards at slab props Ø 76 – 89 mm and 100 x 100 mm to 120 x 120 mm.

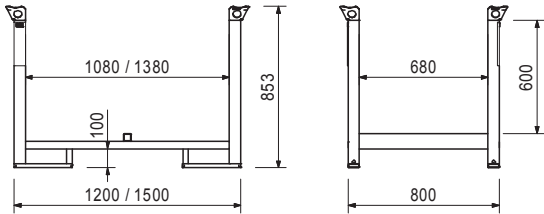


103434	38.500
103429	45.300

Pallets RP-2, galv.
Pallet RP-2 80 x 120, galv.
Pallet RP-2 80 x 150, galv.
For stacking and transportation of formwork and scaffolding components.



Note
Follow Instructions for Use!
Technical Data
Permissible load-bearing capacity 1.5 t.

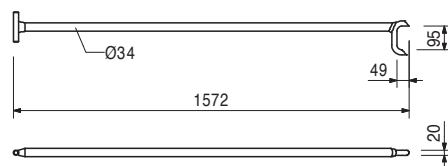
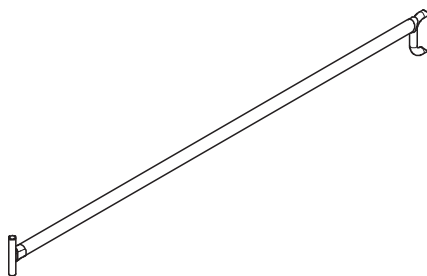


MULTIFLEX Girder Slab Formwork

Item no.	Weight kg
027930	3.060

Assembly Bar 24, galv.

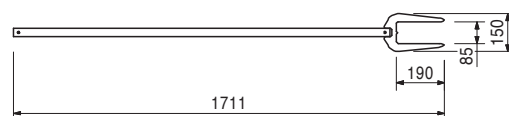
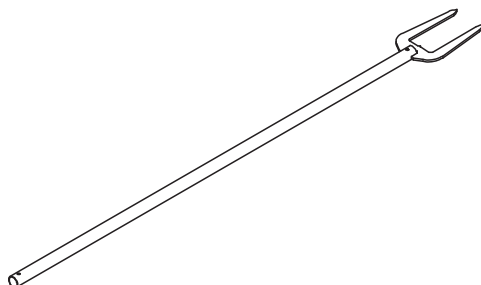
For shuttering of MULTIFLEX with GT 24 Girders.



070740	2.980
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Erection Bar GT/VT, galv.

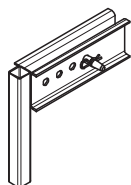
For shuttering of MULTIFLEX with GT 24 or VT 20 Girders.



101290	5.670
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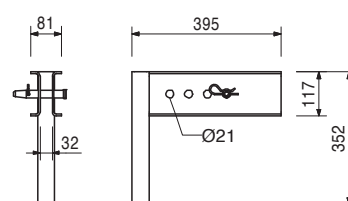
Guardrail Holder GT 24 / VT 20

For assembling a guardrail to GT 24 and VT 20 Girders.



Complete with

1 pc. 105400 Pin Ø 20 x 140, galv.
1 pc. 018060 Cotter Pin 4/1, galv.



Accessories

116292	4.720
061260	6.150

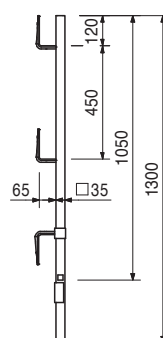
Guardrail Post HSGP-2

Guardrail Post SGP

116292	4.720
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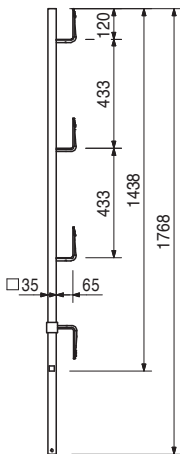
Guardrail Post HSGP-2

As guardrail for different systems.



Item no.	Weight kg
061260	6.150

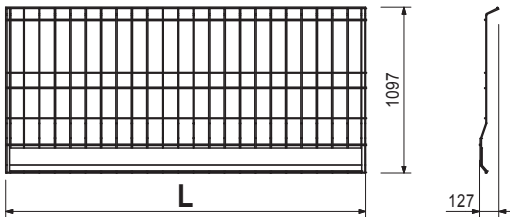
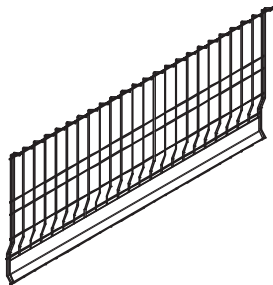
Guardrail Post SGP
As guardrail for different systems.



117326	19.700
117327	10.500

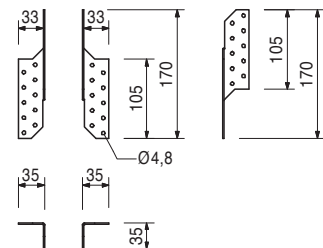
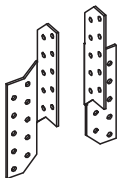
Side-Mesh-Barrier PMB
Side-Mesh-Barrier PMB 260
Side-Mesh-Barrier PMB 130

L
2600
1300
Technical Data
Maximum distance with side-mesh-barrier: PMB 260 max. 2.40 m.



018290	0.098
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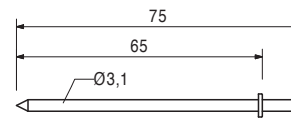
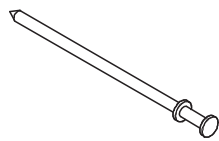
Framing Clip, galv.
For connecting crossed timbers or girders.
For either right or left handling.



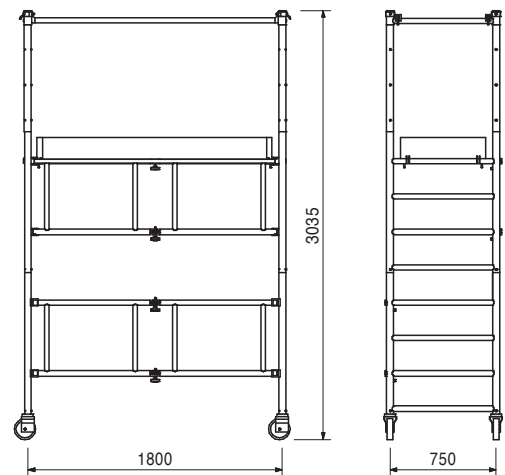
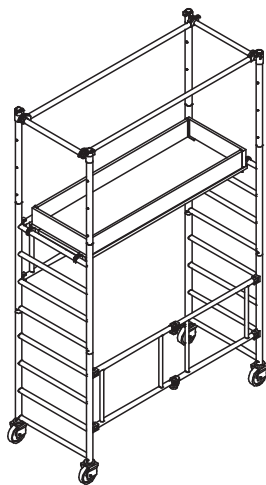
018280	1.000
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Accessories
Double Head Nail, l = 65 mm

Item no.	Weight kg		
018280	1.000	Double Head Nail, l = 65 mm	Note Delivery unit: carton with 1000 pieces.



035500	72.800	Stripping Cart, Alu Mobile working scaffold. Height-adjustable in 25-cm-increments. Platform height max. 2.00 m.	Note Follow Instructions for Use! Technical Data Permissible load 100 kg/m ² .
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Item no.	Weight kg
102031	363.000

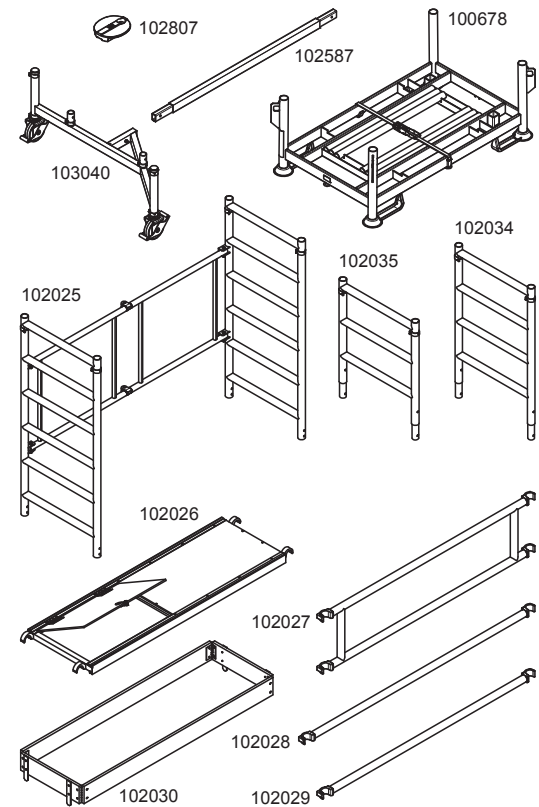
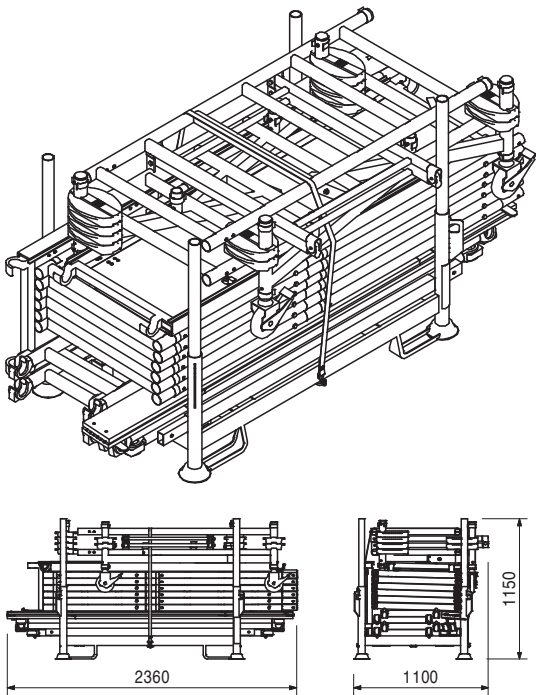
Stripping Cart ASW 465, compl.
Mobile working scaffold. Height-adjustable in 30-cm-increments. Platform height max. 4.65 m.

Packed in:
Ring Pallet USP 104 Item no. 100678, with
Lashing Strap 25 x 5750 Item no. 100707 (x 1)
and Scaffold Tube Steel L = 1000 Item no. 100706 (x 6).

- Complete with**
- 1 pc. 102025 Folding Base Unit 160/190 ASW
 - 6 pc. 102035 Vertical Frame 70/90 ASW
 - 6 pc. 102034 Vertical Frame 70/120 ASW
 - 2 pc. 102026 Entry Platform 190 ASW
 - 1 pc. 102030 Toe-Board Set 70/190 ASW
 - 4 pc. 102027 Double Guardrail 190 ASW
 - 3 pc. 102028 Diagonal Brace 210 ASW
 - 2 pc. 102029 Horizontal Brace 190 ASW
 - 12 pc. 102807 Ballast 10 kg ASW
 - 2 pc. 103040 Lateral complete ASW
 - 1 pc. 102587 Center part ASW galv.

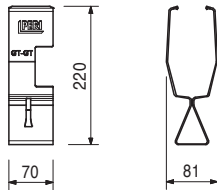
Note
Follow Instructions for Use!

Technical Data
Permissible load 100 kg/m².



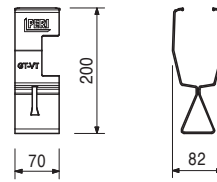
116614	0.537
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Flexclip GT/GT
For connecting girders GT 24 / GT 24.



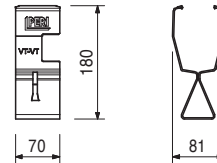
Item no.	Weight kg
116605	0.493

Flexclip GT/VT
For connecting girders GT 24 / VT 20.



116596	0.467
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Flexclip VT/VT
For connecting girders VT 20 / VT 20.

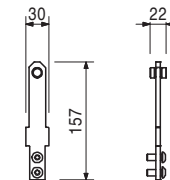


117575	0.202
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Fixing Tool MF, galv.
For assembling Flexclips onto the formwork girders.

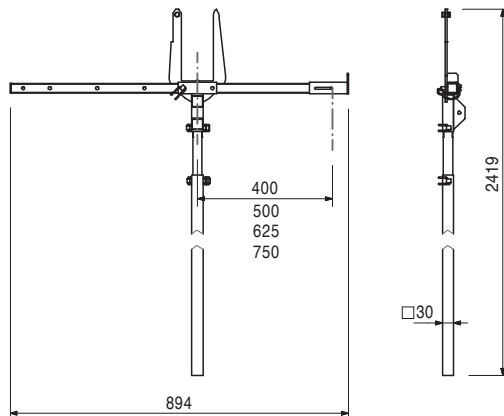
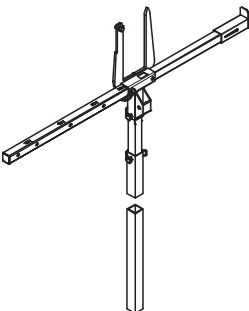


Complete with
2 pc. 117097 Bolt ISO 7380-M8 x 20-10.9-galv.



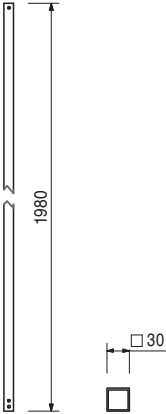
117574	5.940
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Distance Device MF-Plus
For placing, positioning on given distance and aligning the formwork girders at the MULTIFLEX System, as well as assembling the Flexclips.



Item no.	Weight kg
110103	1.200

Telescopic Tube
For assembling the Flexclip in combination with
Fixing Tool Flexclip, galv.



Item no.	Weight kg
117575	0.202

Accessories
Fixing Tool MF, galv.

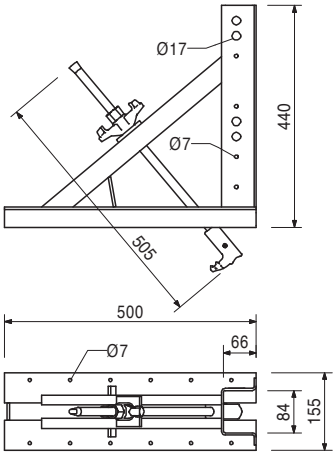
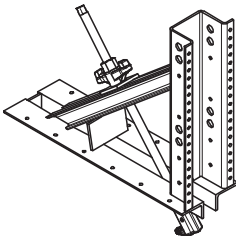
Item no.	Weight kg
065056	11.300

UZ Beam Bracket 40

For forming beams up to 80 cm high. With captive Hook Tie and Wingnut Counterplate.

Note

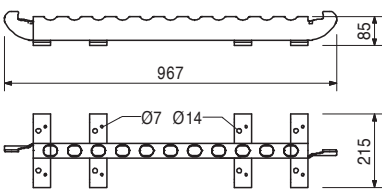
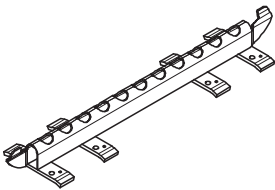
Permissible load: see PERI Design Tables.



065057	7.060
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UZ Beam Width Adjustment Bar 80

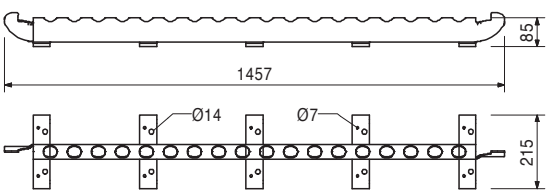
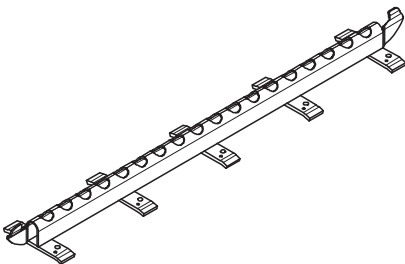
For use with UZ Beam Bracket 40. For beam width max. 40 cm. Beam width more than 40 cm 2 or more of the UZ Beam Width Adjustment Bars 80 to be connected.



065065	10.000
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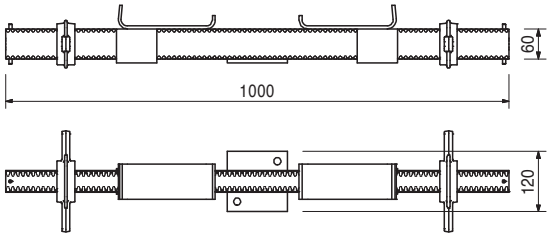
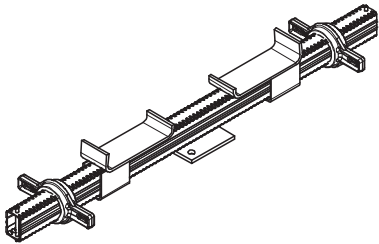
UZ Beam Width Adjustment Bar 129

For use with UZ Beam Bracket 40. For beam width max. 90 cm. Beam width more than 90 cm 2 or more of the UZ Beam Width Adjustment Bars 129 to be connected.



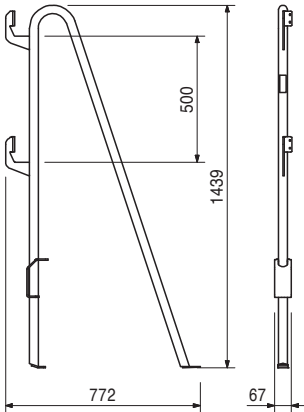
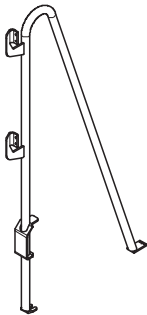
Item no.	Weight kg
065058	8.650

UZ Beam Yoke Waler 100
For carrying one or two GT 24 Girders per side along with additional support.



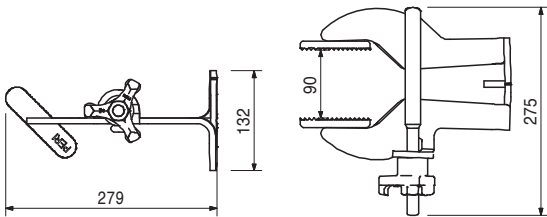
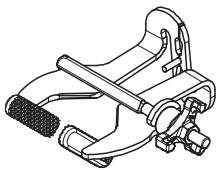
065071	7.410
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AW Handrail Post
For assembling the guardrail on the Slab Stopend Angle AW. Secure rear end with nails.



065072	3.270
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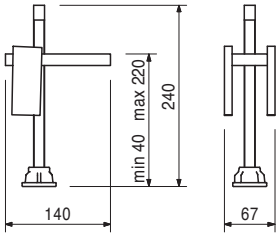
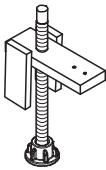
AW Clamp 8 – 10
For clamping the AW Slab Stopend Angle to girders or timbers with 8 – 10 cm thickness. With captive Triple Wingnut.



Item no.	Weight kg
065075	1.750

AW Bracket

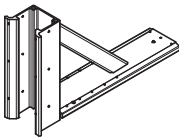
As filler for the AW Slab Stopend Angle. For height adjustment of side girder.



065070	1.670
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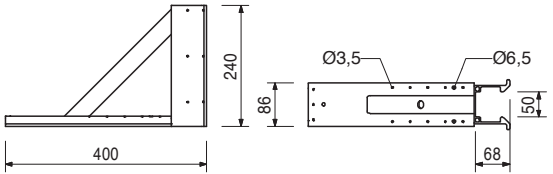
AW Slab Stopend Angle

For forming stopends for slabs and to form beams.



Note

Permissible load: see PERI Design Tables.

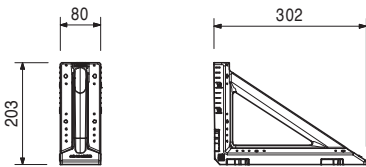
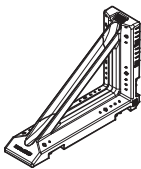


126299	0.466
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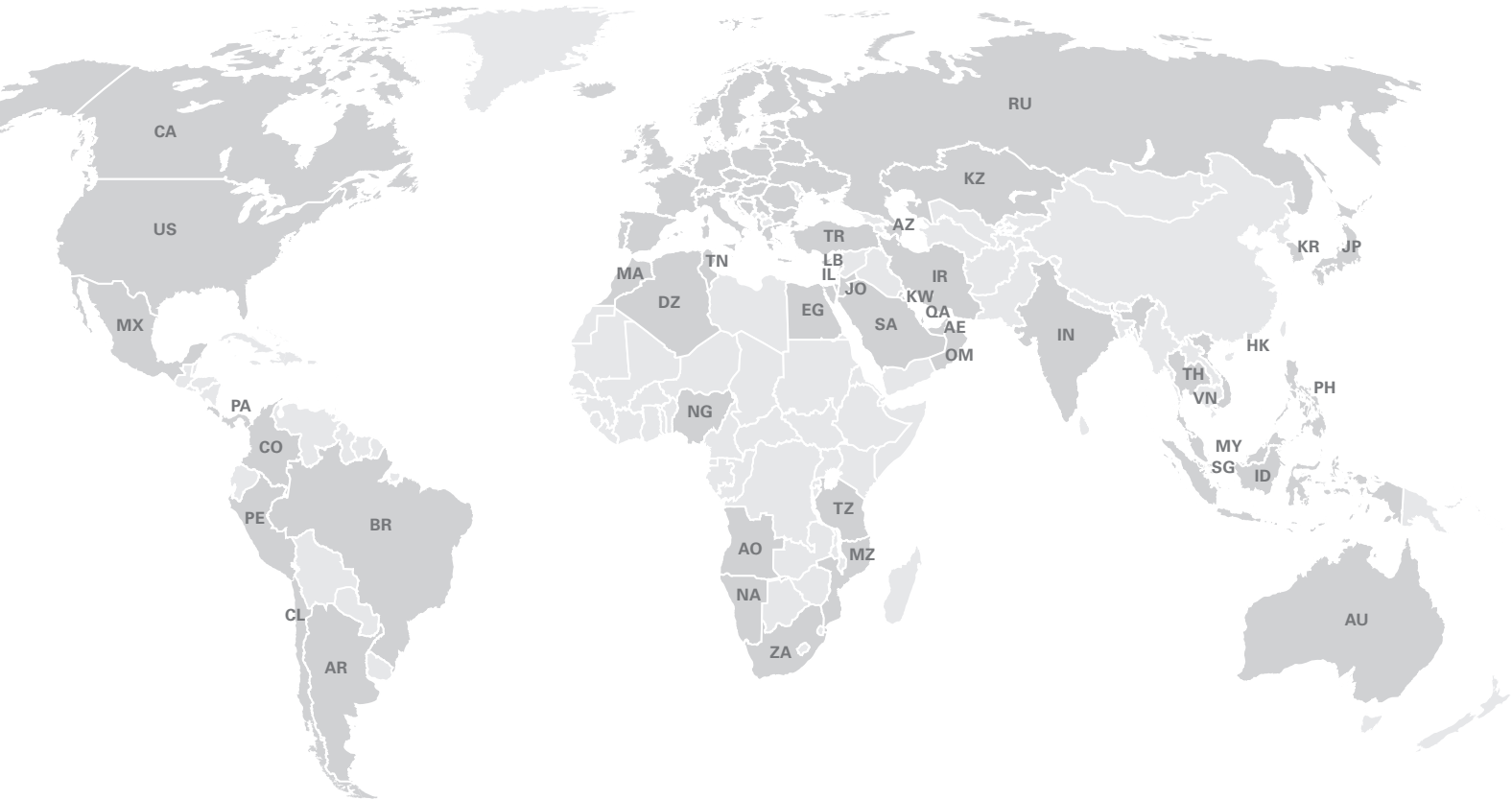
Plastic Slab Stopend Angle

Note

See data sheet!



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