





MevaDec (as of 04/2019)

Technical Instruction Manual









Product features

The requirements for slab formwork vary from one construction project to the next depending on the

- → floor plan
- → room dimensions
- ceiling height
- → slab thickness
- underside of slab
- → and thus require site-specific solutions. The solution designed by the MEVA engineers is called MevaDec, a slab formwork system made up of aluminium sections and an integrated plastic forming plate.

MevaDec is designed to enable various slab formwork methods to be carried out using one single system, i.e. identical parts can be used for different applications.

- → Drop-head-beam-panel method
- Panel method

No matter which forming method is best for your construction project, the same components are always used.

The system also allows the different methods to be combined, thus significantly reducing the number of filler areas. The number and the distance between the props is governed by the system and is not decided at the construction site. Thus, the person responsible can be certain that props are located where they are required without adding extra props just to be on the safe side.

The weight-optimised MevaDec possesses an ergonomic grip profile for efficient work. All aluminium parts are coated with a high-quality cured powder coating. Thus ensures low concrete adhesion and easy cleaning.

The five main components of the MevaDec system are:

drop head primary beam secondary beam panels prop head

The drop head allows "early stripping", which results in less material stock on-site as it can be re-used earlier and significantly reduces the cleaning effort.

The drop heads and the prop heads are already fitted to the props ex-works, but do, of course, fit all modern props.

The main components of the new (as of 04/2019) and the old Meva-Dec generations (up to 04/2019) are mutually compatible.

Props

Refer to the separate load charts for the maximum slab thickness as a function of the props.

Abbreviations, figures and tables, etc.

The abbreviation MD is used for the MevaDec system. DIN means Deutsche Industrie-Norm (German Industrial Standard). E DIN (E = Entwurf / draft) means that the DIN is in draft status and not yet approved. Any further abbreviations are explained where they are used for the first time.

TÜV means Technischer Überwachungsverein. This is the independent German organisation that tests the safety of technical installations, machinery and motor vehicles. If a product passes the test, it is permitted to carry the GS seal. GS stands for Geprüfte Sicherheit (approved safety).

Measurements: This manual uses the metric system, i.e. m (for metre), cm (for centimetre) and mm (for millimetre).

The page numbers of this manual start with MD and the figures and tables are numbered per page. Depending on its product abbreviation, a cross reference in the text refers to a page, table or figure in this or in another manual. This is indicated by the product code.







Please note

This Technical Instruction Manual contains information, instructions and tips that describe how to use the MEVA equipment on the construction site in a proper, quick and economic way. Most examples shown are standard applications that will occur in practice most often. For more complicated or special applications not covered in this manual, please contact our application engineering department. They will help you without delay.

When using our products, local health and safety regulations must be observed. Please observe the assembly instructions that your local contractor or employer has created for the site on which the MEVA equipment is used. Such instructions are intended to minimise sitespecific risks and must contain the following details:

- → The order in which all working steps including assembly and disassembly must be carried out
- → The weight of the panels and other system parts
- → The type and number of ties and braces as well as the distance between them
- → The location, number and dimensions of working scaffolds including the working area and fall protection equipment required
- → Attachment points for transport by crane. With regard to panel transport, please observe this manual. Any deviation will require structural verification.

Important: Generally, only well-maintained material may be used. Damaged parts must be replaced. Use only original MEVA spare parts for replacement.

Contents

Forming methods	
MevaDec-e panel	5
MevaDec-e panel connector	6
MevaDec-e drop head	7
MevaDec-e primary and secondary beam	8
MevaDec prop head	
MevaDec-e prop connector	10
MevaDec-e compensation beam	12
Drop-head-beam-panel method	13
Panel method	21
_evelling	25
MevaDec in combination with MEP	26
MevaDec in combination with MT 60	28
-ree slab edges	29
MevaDec-e support for guard-railing post (GRP)	30
MD stripping support	31
Mobile aluminium scaffold	32
Fransport	34
Transport guidelines	39
lob protocol	40
Compatibility of MevaDec	41
Services	42
Product list	43
Load Charts	69



Forming methods

Drop-head-beam-panel method

Fig. 4.1

The supporting system consists of primary beams and drop heads. Ready-made panels are installed between the primary beams. The drop head permits early stripping of the primary beams and panels. The panels can be installed in any position and then moved in the primary beam, even beyond the drop head.

On the wall connections, either the primary beams are supported by the lowerable MevaDec-e prop connector for beams (see page MD-10) or the panels are supported directly by the lowerable MevaDec-e prop connector for panels (see page MD-11) or by the prop head from the panel method.

The drop-head-beam-panel method is particularly suitable for large-scale floor plans, e.g. underground garages, offices and industrial buildings.

Panel method

Fig. 4.2

Using this method, the selfsupporting panels are directly supported at their point of intersection. The same prop head is used at the edges as well as in the corners.

The panels are swung into place from below and the automatic restraint mechanism in the prop head engages. Only two basic elements are required to form a slab: the panel and the prop with prop head.

The panel method is ideal for small-scale floor plans such as those found in residential housing construction. It is also used to adapt the drop-head-beampanel method, e.g. in the wall connection area.

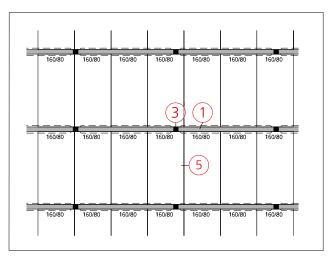


Fig. 4.1 Drop-head-beam-panel method

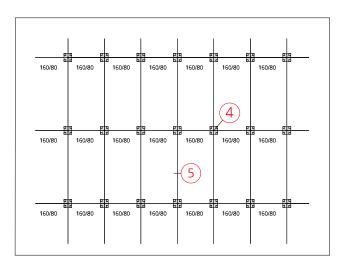
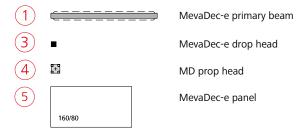


Fig. 4.2 Panel method





MevaDec-e panel

c	i-	_	_

160/80 cm 160/60 cm 160/40 cm 80/80 cm 80/60 cm 80/40 cm

The MevaDec-e panels consist of closed, plastic-coated aluminium sections equipped with grip openings (Figures 5.1 and 5.2). The cross stiffeners allow easy and convenient handling (Fig. 5.3). In addition, the alkus facing AL 10 is protected by a silicone layer in the frame. The panels can be installed in any position in the primary beam (Fig. 5.4). As the panels are self-supporting, they can be supported by the prop heads at any position on the frame or the cross stiffeners.

Note

When compacting the concrete, the internal vibrators should be equipped with rubber caps to protect the facing.

alkus all-plastic facing

The tried-and-tested polypropylene and aluminium composite facing has all the positive properties of plywood plus important advantages: longer lifespan, greater load-bearing capacity, better nail-holding ability, fewer and easier repairs, 100% recyclability.

Besides the obvious advantages such as considerably reduced cleaning effort, minimum consumption of release agent and an excellent, uniform concrete finish, alkus offers substantial ecological benefits.

Substituting plastic for wood saves valuable timber resources. Also, alkus avoids the release of highly toxic dioxin that is released when burning plywood bonded with phenolic resin.

Used or damaged alkus facings can be recycled to produce new facings. They are 100% recyclable and subject to a global return policy.

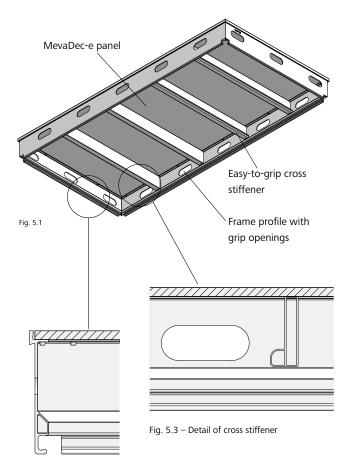
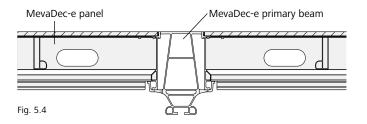


Fig. 5.2 – Detail of frame profile

Description	Ref. No.
MevaDec-e AL	
160/80	22-305-10
160/60	22-305-15
160/40	22-305-20
80/80	22-305-30
80/60	22-305-35
80/40	22-305-40



MevaDec-e panel connector

With the MevaDec-e panel connector (Fig. 6.1), two adjacent MevaDec-e panels (Figures 6.2 and 6.3) can be firmly connected to each other at the grip openings, e.g. at the slab edge.

In addition, a MevaDec-e restraint mechanism can be attached to the panel connector in order to anchor the slab formwork to the ground using a tensioning chain or a lashing strap (see page MD-29).

Note

The MevaDec panels of the old generation can be connected using MD assembly locks. Panels of the old and new generations can be used next to each other, but not connected to each other.

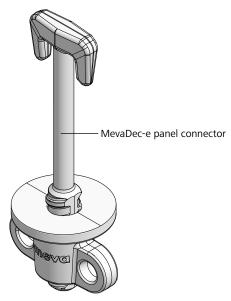
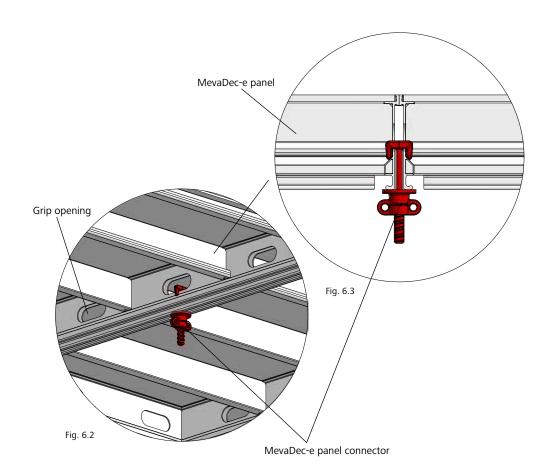


Fig. 6.1



Description	Ref. No.
MevaDec-e Panel connector	29-303-00

MevaDec-e drop head

The MevaDec-e drop head (Fig. 7.4) allows the slab formwork to be lowered by approx. 19 cm (Figures 7.2 and 7.3). This frees up panels and primary beams for further use, while the slab remains safety supported (early stripping).

The MevaDec-primary beams must always be suspended in the direction of the safety latches.

The drop head is lowered by hitting the wedge plate with a hammer.

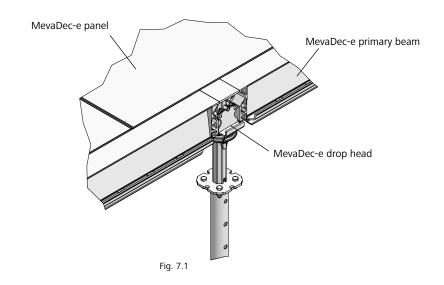
When using MevaDec with drop heads, the panels, primary beams and secondary beams can be stripped even earlier than defined in the German standard DIN 1045.

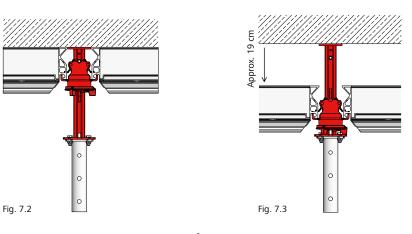
The minimum concrete strength of 8 N/mm² must be observed. If the concrete slab is subject to higher loading, greater concrete strengths are required – see DBV Fact Sheet "Ausschalfristen und Nachlaufunterstützung" (Stripping times and reshoring).

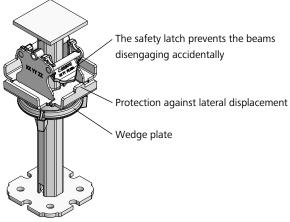
Refer to Table 7.5 for the necessary prop length as a function of the room height.

Depending on the application, the MevaDec-e drop head can be inserted and secured using pin 14/90e or it can be screwed on. Refer to the MevaDec load charts.

Description	Ref. No.
MevaDec-e drop head	29-301-10
MevaDec-e drop head	20 204 05
(plug-in version) Pin 14/90e	
MEP 300 with MD drop head	
MEP 450 with MD drop head	29-908-30
EuMax	
30/250 with MD drop head	29-908-11
30/350 with MD drop head	29-908-20
EuMax	
30/450 with MD drop head	29-908-24







Using the MevaDec-e drop head		
Clear room height (in cm)	Length of prop + 40	
Length of prop (in cm)	Clear room height - 40	

Fig. 7.4

Table 7.5

MevaDec-e primary and secondary beam

MevaDec-e primary beam (Fig. 8.1)

Lengths: 270 cm

210 cm 160 cm 80 cm

The primary beams together with the drop heads form the Meva-Dec support system. Secondary beams and panels can be mounted in the primary beams in any position. The assembly direction can be changed by mounting one primary beam into another. This permits smooth adaptation to all room sizes. The primary beam has holes in the support groove to make it easier to clean.

MevaDec-e secondary beam

(Fig. 8.2)

Lengths: 160 cm

The secondary beams are used for length compensation. They are hooked into the primary beams (Fig. 8.3). The upper edge of the secondary beam is 21 mm (i.e. thickness of the facing) below the primary beams and the panels. The facing is placed on the secondary beams. The secondary beams are equipped with a plastic nailing strip, on which the loose facing is nailed in place. The spacing between the secondary beams depends on the slab thickness and the facing used (Fig. MD-11.2).

Note

MD secondary beams of the old generation can be inserted into the MevaDec-e primary beam.

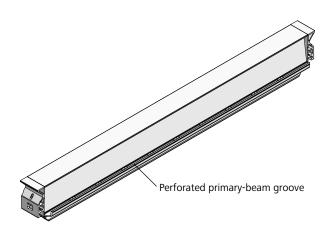


Fig. 8.1 MevaDec-e primary beam

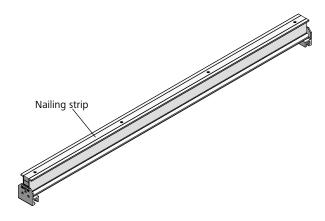


Fig. 8.2 MevaDec-e secondary beam

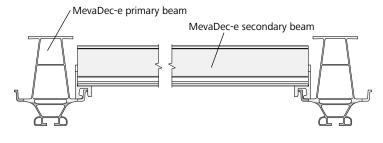


Fig. 8.3

Description	Ref. No.
MevaDec-e	
Primary beam 270	22-305-50
Primary beam 210	22-305-55
Primary beam 160	22-305-60
Primary beam 80	22-305-65
MevaDec-e	
Secondary beam 160/2	21 22-305-80
Secondary beam 80/2	1 22-305-85



MevaDec prop head

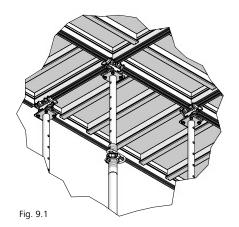
The MD prop head is a plasticcoated casting.

With the prop head, the panel can be supported in three ways:

- → at the point of intersection of four MD panels, ① (Figures 9.1 and 9.2)
- → at the joint of two panels located at the slab edge, ② (below the longitudinal section) (Figures 9.2 and 9.4)
- → at the cross stiffener in the corner area, ③ (Figures 9.1 and 9.2)

The prop head is equipped with an automatic restraint mechanism (Fig. 9.5). The MevaDec-e panels can be hooked in place easily from below (Fig. 9.3), swung up using the MD assembly stick 340 and then supported on this (see Fig. MD-45.2).

Upon delivery, the MD prop head is already installed to the prop; the plug-in MD prop head is delivered as a loose part (Figures 9.5 and 9.6).



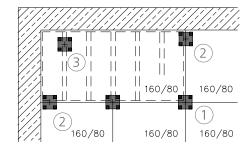
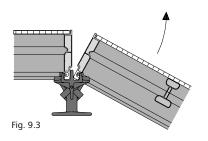
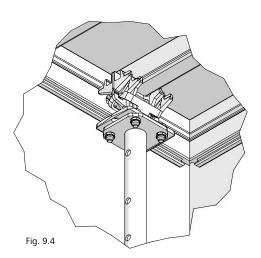
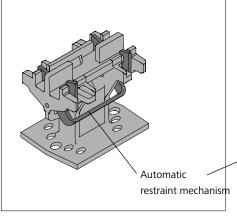


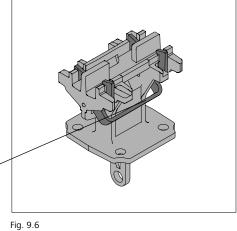
Fig. 9.2





MD prop head





MD prop head (plug-in version)

Fig. 9.5

 Description
 Ref. No.

 MD assembly stick 340
 29-302-35

 MD prop head
 29-301-80

 MD prop head
 (plug-in version)

 29-301-85
 Pin 14/90e

 MD 300/20 with
 29-803-55

 MD 300/20 with
 29-908-17

 MD 400/20 with
 MD prop head

 MD prop head
 29-908-27

MevaDec-e prop connector

The lowerable MevaDec-e prop connector for main beams (Fig. 10.1) enables the slab formwork to be lowered by approx. 19 cm (Fig. 10.2) and thus facilitates early stripping of the MevaDec-e primary beam connected to the underside. This makes sense where the MevaDec-e primary beam abuts the wall (Fig. 10.3 and page MD-16.3).

The MevaDec-e prop connector is lowered by hitting the wedge plate with a hammer.

The MevaDec-e prop connector is attached to the MevaDec-e primary beam using the integrated hammer-head screw in the profile groove on the underside of the primary beam.

The required minimum concrete strength of 8 N/mm² is to be observed during early stripping. If the concrete slab is subject to higher loading, greater concrete strengths are required – see DBV Fact Sheet "Ausschalfristen und Nachlaufunterstützung" (Stripping times and reshoring).

Refer to Table 10.4 for the necessary prop length as a function of the room height.

The MevaDec-e prop connector is attached to the prop using four screws.

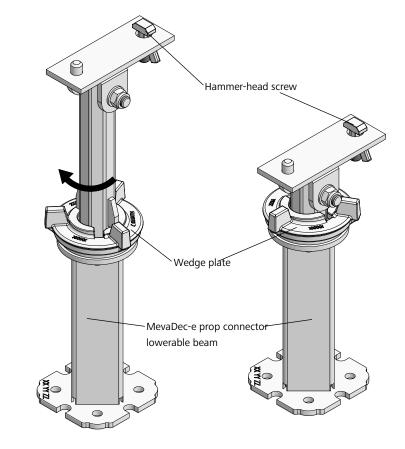
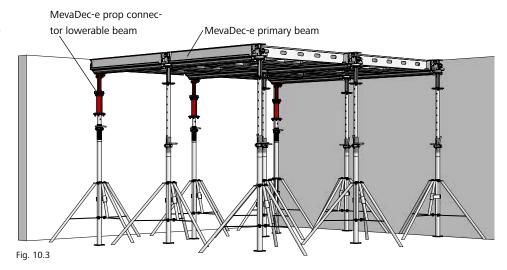


Fig. 10.1 Fig. 10.2 Lowered



		Using the MevaDec-e prop connector lowerable beam	
	1	Clear room height (in cm)	Length of prop + 75.8
escription Ref. No.		Length of prop (in cm)	Clear room height - 75.8

Table 10.4

MevaDec-e prop connector

The lowerable MevaDec-e prop connector for panels (Fig. 11.1) enables the slab formwork to be lowered by approx. 19 cm (Fig. 11.2) and thus facilitates early stripping of the directly supported MevaDec panels. This makes sense where the MevaDec-e panel directly abuts the wall (Fig. 11.3 and page MD-15.3).

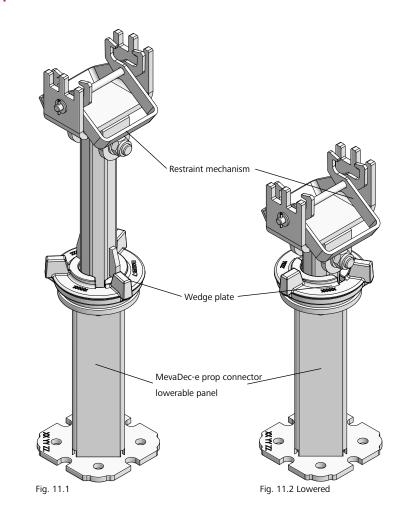
The MevaDec-e prop connector is lowered by hitting the wedge plate in a clockwise direction with a hammer.

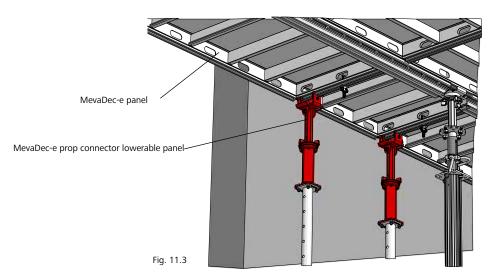
The lowerable MevaDec-e prop connector for panels is equipped with an automatic restraint mechanism (Figures 11.1 and 11.2). The MD panels can be hooked in place easily from below, swung up using the MD assembly stick 340 and then supported on this.

The required minimum concrete strength of 8 N/mm² is to be observed during early stripping. If the concrete slab is subject to higher loading, greater concrete strengths are required – see DBV Fact Sheet "Ausschalfristen und Nachlaufunterstützung" (Stripping times and reshoring).

Refer to Table 11.4 for the necessary prop length as a function of the room height.

The MevaDec-e prop connector is attached to the prop using four screws.





Description	Ref. No.
MevaDec-e prop connector lowerable panel	29-303-30

Using the MevaDec-e prop connector lowerable panel		
Clear room height (in cm)	Length of prop + 75.5	
Length of prop (in cm)	Clear room height - 75.5	

Table 11.4

MevaDec-e compensation beam

The compensation beams (Fig. 12.1) are used for job-built length compensation. They are equipped with plastic nailing strips on the top and support the loose facing in the primary beam or on the panel.

The upper edge of the compensation beam is 21 mm (i.e. thickness of the facing) below the primary beams and the panels.

The MevaDec-e compensation beams are also available in a version for use with a 27 mm thick facing.

The compensation beam is inserted into the groove of the MevaDec-e primary beam. The integrated spacer prevents it falling out. The MevaDec-e compensation beam can be hooked into the grip opening of the MevaDec-e panel.

Note

The MevaDec-e compensation beam cannot be inserted into the MD primary beam (old generation), nor can it be connected to the MD panel (old generation).

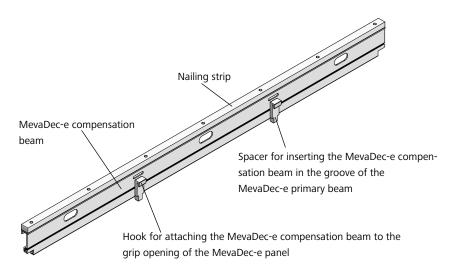
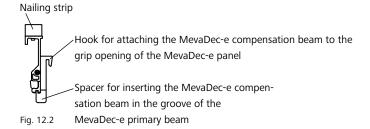


Fig. 12.1



Description	Ref. No.
MevaDec-e compensation b	eam
210/21	22-306-10
160/21	22-306-20
80/21	22-306-30
60/21	22-306-40
40/21	22-306-50
210/27	22-306-15
160/27	22-306-25
80/27	22-306-35
60/27	22-305-45
40/27	22-305-55

Drop-head-beam-panel method

Formwork assembly

Attention

When working from above, suitable protective measures for the assembly work are to be implemented on the basis of the risk assessment

However, the formwork should be erected from the ground as far as possible (or from a scaffold depending on the height).

Erecting formwork

Fig. 13.1

First, set up two props with prop heads next to one wall at a corner. Then set up a prop with a prop connector or a forked prop head next to the wall that is perpendicular to the first wall and next to this a prop with MevaDec-e drop head so that these two props are parallel to the first two props. All four props are secured with tripods and adjusted to the same height.

Fig. 13.2

A primary beam is hooked into the drop head at one end and supported by the forked prop head or the prop connector at the other end.

Fig. 13.3

Install the panel. It is now supported by the primary beam on one side and by the prop heads at the other. The prop located in the corner supports the panel at its first cross stiffener.

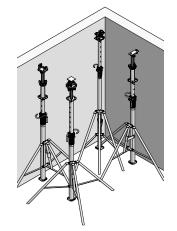
Fig. 13.4

Now set up further props with prop heads along the wall, hook in further primary beams on the drop heads and swing them up together with the prop equipped with drop head.

Fig. 13.5

Set up the next row of primary beams parallel to the first at a distance of 1.60 m (panel length) and install the panels to stabilise the formwork. Then continue erecting rows of primary beams and installing panels.

The panels can be inserted into the primary beams from below (depending on the height, while standing on a working scaffold) or from above. When inserting from above, suitable protective measures for the assembly work are to be implemented on the basis of the risk assessment. Always ensure that the formwork possesses sufficient stability (by anchoring it to the ground or reinforcing it).



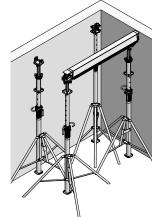
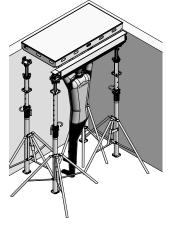


Fig. 13.1

Fig. 13.2



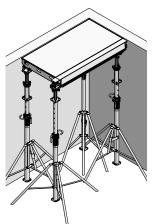


Fig. 13.3

Fig. 13.4

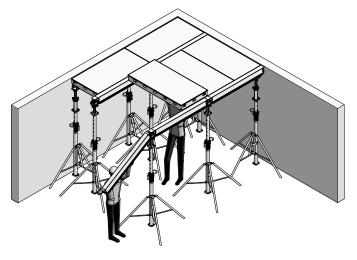


Fig. 13.5

Description	Ref. No.
Tripod	
Tripod 120	29-905-52

Fig. 14.1

The easiest way to achieve a length adjustment in the primary-beam direction is to change the assembly direction by installing a primary beam (length 1.60 m) between two primary beams and rotating the assembly direction of the panels by 90°.

Now push the panels against the wall and support them on a support beam at the slab edge. For further compensation options refer to pages MD-15 and MD-16.

Fig. 14.2

The residual gap between primary beam and wall is closed using MD cover profile 10 cut to size.

Fig. 14.3

Residual gaps between the panels are closed using secondary beams and a piece of facing.

Fig. 14.4

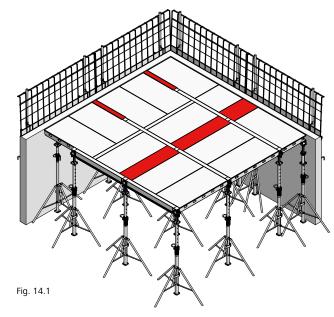
Levelling the slab formwork using the laser support. The support is hooked into the T groove of the primary beam and enables the formwork to be levelled by a single person. Before pouring the concrete, ensure once again that the wedge rings of the drop heads are absolutely secure.

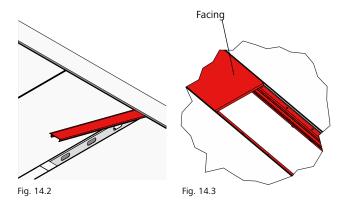
Stripping

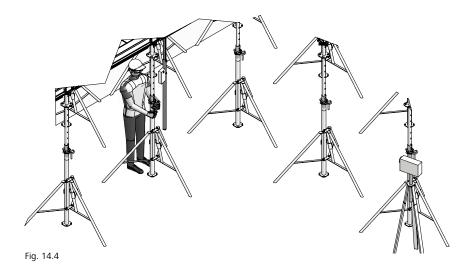
Loosen the wedge rings of the drop heads with a hammer. As soon as several drop heads are loose, the formwork lowers by approx. 19 cm in this area. Proceed until the entire formwork is lowered. The panels can now be lifted out of the primary beams.

The primary beams are then stripped. To do this, raise one end of the primary beam. The beam can now be moved to one side over the anti-slip protection, then lowered and removed.

The props with MevaDec-e drop heads remain in place as reshoring.







Drop-head-beam-panel method

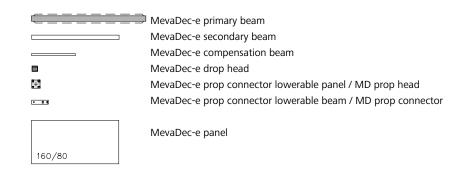
Start of formwork assembly

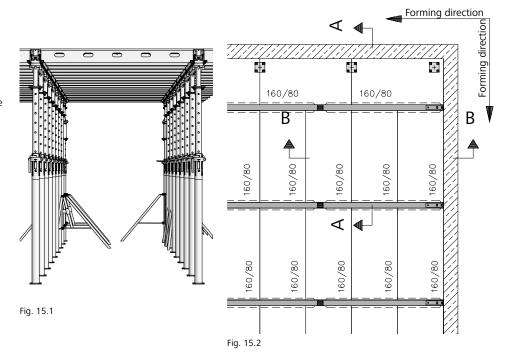
When using this method, we recommend starting assembly in the corner which is best suited for trouble-free assembly in both directions.

The first panel is placed next to the wall with either its short side or its long side against the wall. At the corner and along the wall it is supported by the prop head and on the other side it is hooked into the primary beam.

When forming against an existing wall, the primary beam should be placed directly against this wall and supported by a lowerable MevaDec-e prop connector for beams (see page MD-10), a prop connector or a forked prop head. The end of the primary beam is pushed directly against the wall (Fig. 15.2).

Exception: If the drop-head-beam-panel method is to be used to form a small room (≤ 30 m²), ensure that a row of at least three primary beams is installed. For trouble-free stripping we recommend supporting the primary beam at the wall with the lowerable MevaDec-e prop connector for beams.





Section A - A

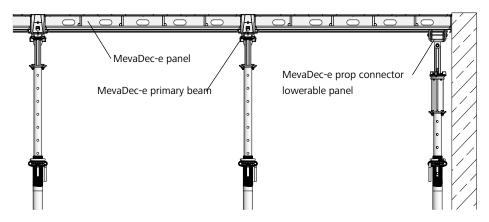
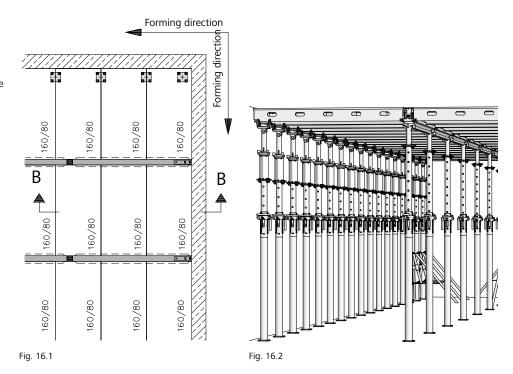


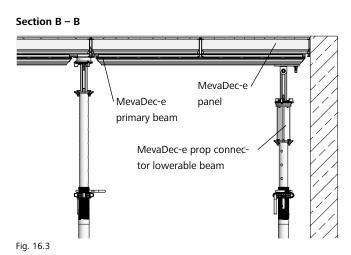
Fig. 15.3

In general, the rows of primary beams are installed parallel to the longer wall. In this case we recommend placing the panels lengthwise along the wall (Figures 16.1 to 16.3).

If the formwork has been planned in detail beforehand, the beam and panel orientation will be optimised.

Alternatively, a row of formwork girders can be used to support the panels along the slab edge.





Length adjustment in primarybeam direction

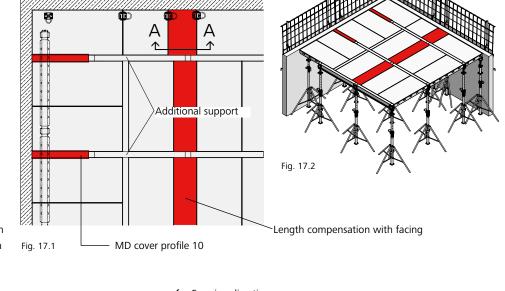
Residual gaps up to 1.60 m are compensated for by changing the assembly direction. The panels are pushed against the wall and supported by a row of primary beams. This moves the filler area inwards, allowing it to be closed easily (Fig. 17.1).

If the props are loaded on one side only, we recommend adding an additional support at the point of intersection of the primary beams (Fig. 17.1).

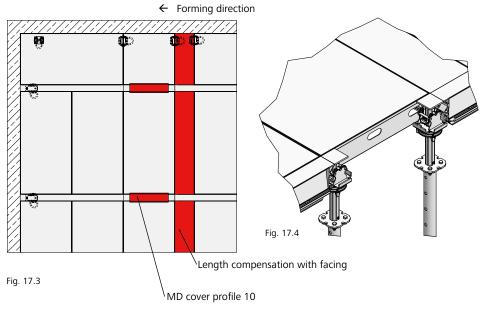
If the residual gap is smaller than 60 cm, it is possible to start with the last primary beam. For these applications we recommend using primary beam 160. The panels are pushed against the wall so that the third panel is supported by the drop head on one side and on the other side overlaps the drop head right up to the primary beam (Fig. 17.3).

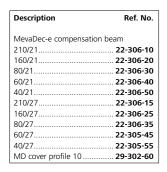
At the slab edge, where the panels are directly supported, compensation is performed with MevaDec-e compensation beams (see page MD-12). They are supported by the prop heads and hooked into the grip opening of the MevaDec-e panel.

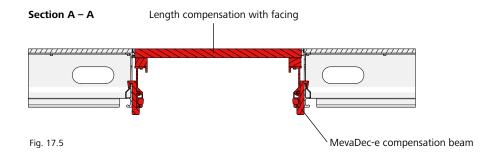
The residual gap between primary beam and wall or between the primary beams is closed with the MD cover profile 10 (Figures 17.1 to 17.3).



Forming direction







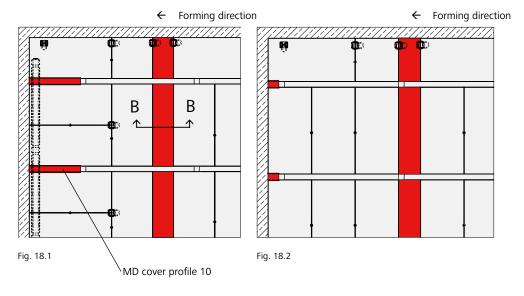
Length adjustment in primarybeam direction

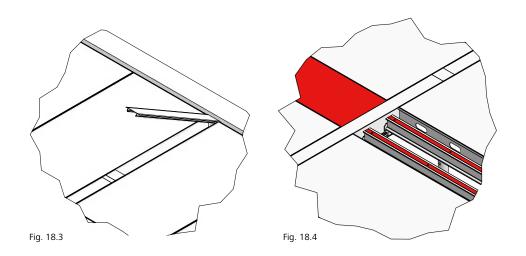
A most economical way to achieve length compensation is to rotate the panels and support them directly with prop heads at their points of intersection (Fig. 18.1) instead of hooking them into a primary beam. If the residual gap does not exceed 20 cm, the last three panels are pushed completely against the wall. Connecting with the MevaDec-e panel connector prevents the overhanging panel tipping (Fig. 18.2).

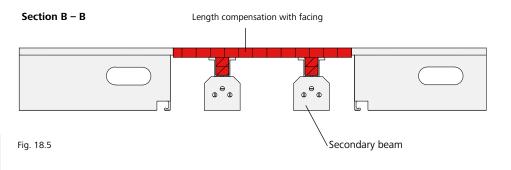
Residual gaps between panels can be reduced to less than 20 cm by using panels of different widths (80 cm, 60 cm, 40 cm).

To bridge gaps, the MevaDec-e secondary beam can be used. The 21 mm facing is flush with the top edges of primary beam and the panel. For gaps up to 16 cm one secondary beam is sufficient.

For gaps between 17 and 50 cm, two MevaDec-e secondary beams are used (Figures 18.4 and 18.5).









Slab Formwork

Drop-head-beam-panel method

Length adjustment perpendicular to the primarybeam direction

Length adjustment perpendicular to the primary-beam direction is achieved by supporting the panels directly (Fig. 19.1).

The residual gap (≤ 40 cm) is closed with a piece of facing. This is supported on one side by an MevaDec-e compensation beam and on the other on a support beam (H20) at the edge of the slab (Fig. 19.2). For a length compensation up to 10 cm it is sufficient to wedge the compensation beam with the facing against the wall. Alternatively, a square timber can be placed directly on the prop head rather than using a compensation beam.

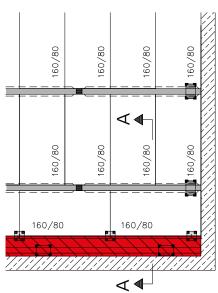
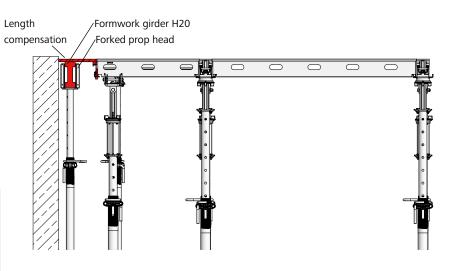


Fig. 19.1

Section A - A

Fig. 19.2



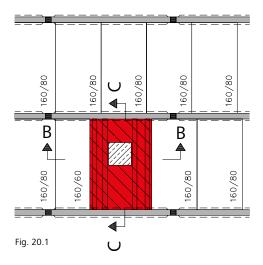
Description Ref. No. MevaDec-e compensation beam 22-306-10 210/21. 160/21 22-306-20 60/21 22-306-40 40/21. 22-306-50 210/27 22-306-15 160/27. 22-306-25 80/27. 22-306-35 22-305-45

Problem areas

Using secondary beams eliminates the need to use additional props to support the facing.

For columns up to 50 cm, we recommend locating the filler areas around the column at the same time (Figures 20.1 to 20.5). This reduces the compensation areas to a minimum.

If the columns are larger, a change of the assembly direction of the primary and secondary beams is required (Fig. 20.2). By changing the position at which the change of the assembly direction occurs, further filler areas can be avoided.



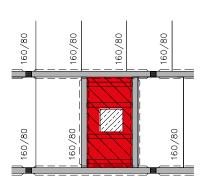


Fig. 20.2

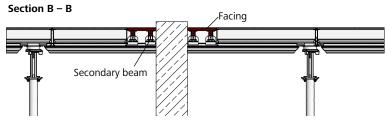


Fig. 20.3

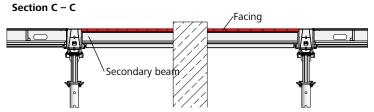


Fig. 20.4

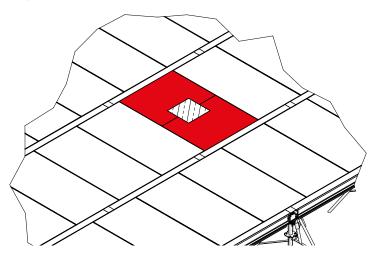


Fig. 20.5

Description	Ref. No.
MevaDec-e secondary beam	
160/21	22-305-80
80/21	22-305-85



Panel method

Formwork assembly

Attention

When working from above, suitable protective measures for the assembly work are to be implemented on the basis of the risk assessment

However, the formwork should be erected from the ground as far as possible (or from a scaffold depending on the height).

Erecting formwork

Set up three props with prop heads in one corner of the room with a distance of 1.60 m or 0.80 m between them, stabilize them with tripods and adjust them to the same height.

Install the panel in the prop heads so that the prop located in the corner supports the first cross stiffener of the panel.

Continue installing panels on prop heads and swinging them up until the first row is finished. The panels are automatically secured to prevent them lifting out.

From the second row on, the panels are hooked into the prop heads of the preceding row.

Swing the panel up with the first assembly stick 340 and leave the stick as a temporary support.

- ① The panel is only temporarily supported by the assembly stick 340
- ② A prop with MD prop head is placed under the corner of the panel and adjusted.
- ③ Hook in the next panel, swing it up with the assembly stick 340 and support it temporarily with the stick
- ④ Erect the next prop with MD prop head and adjust it vertically. Now remove the first assembly stick 340 and continue as described under ③ (Figures 21.1 and 21.2).

Stripping

Stripping is done in the reverse order to assembly. Begin stripping in the filler areas. Support a panel with the assembly stick, release the first prop and remove it. The prop row located behind this can now be released and lowered by approx. 1 to 2 cm. Swing the panels down and unhook them.

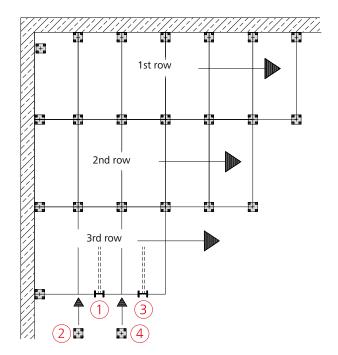


Fig. 21.1

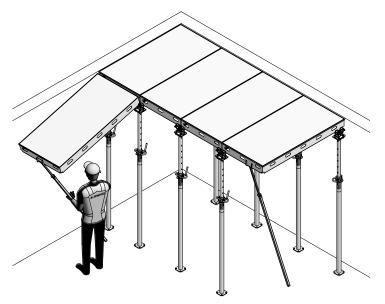


Fig. 21.2

Description	Ref. No.
MD assembly sti	ck 340 29-302-35

Panel method

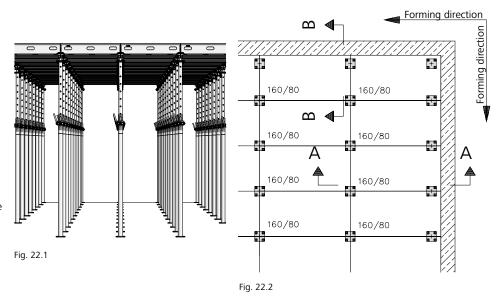
When using this method, we recommend starting assembly in the corner which is best suited for trouble-free assembly in both directions. In general, the formwork is erected along the longitudinal axis of the room (Figures 22.1 to 22.4).

Important

If a MevaDec-e panel 160/80 is normally supported, i.e. with one prop in each corner (Fig. 22.2), the maximum load capacity of the MD panel is reached at a slab thickness of 0.47 m.

Attention

Refer to the separate load charts for the maximum permissible compressive forces on the props.



MevaDec-e compensation beam
MD prop head
Forked prop head H20

MevaDec-e panel

160/80

Section A - A

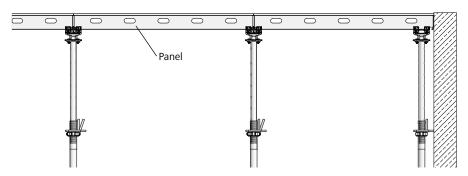
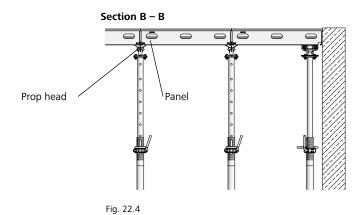


Fig. 22.3



Panel method

Length compensation at the edge of the slab

The gap is always less than 40 cm and can be reduced to 20 cm or even less through a timely changeover to a panel width of 60 cm.

The residual gap is closed with a piece of facing. This is supported on one side by a MevaDec-e compensation beam and on the other on a support beam (H20) at the slab edge.

For a length compensation up to 10 cm it is sufficient to wedge the compensation beam with the facing against the wall.

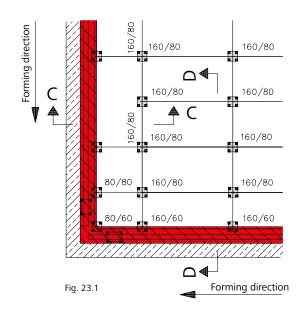
Alternatively, a square timber can be placed directly on the prop head rather than using a compensation beam (Figures 23.1 to 23.3).

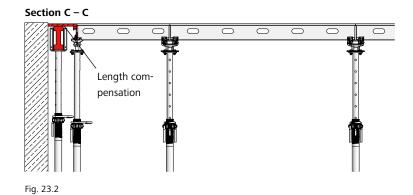
The MevaDec-e compensation beam can be hooked into the grip opening of the MevaDec-e panel.

Attention

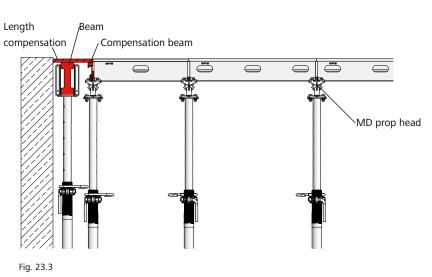
When working from above, suitable protective measures for the assembly work are to be implemented on the basis of the risk assessment.

Description	Ref. No.
MevaDec-e compensatio	un haam
210/21	
160/21	
80/21	
60/21	
40/21	22-306-50
210/27	22-306-15
160/27	22-306-25
80/27	22-306-35
60/27	22-305-45
40/27	22-305-55





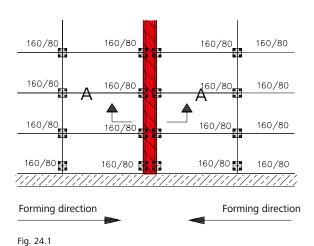
Section D - D



Panel method

Length compensation in the middle of the slab

The filler area can also be moved to the middle of the slab. In this case, compensation is done with system parts only, i.e. there is no need to use additional support beams. The residual gap is easily closed with compensation beams and a piece of facing. The facing rests on the compensation beams, which are placed in the prop heads and hooked into the grip opening of the MevaDec-e panel. This type of compensation is ideal for L-shaped layouts, for example, where the formwork assembly is usually started at two or more ends at the same time. This allows filler areas to be optimised (Figures 24.1 to 24.3 and Table 24.4).



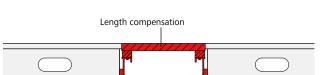


Fig. 24.2

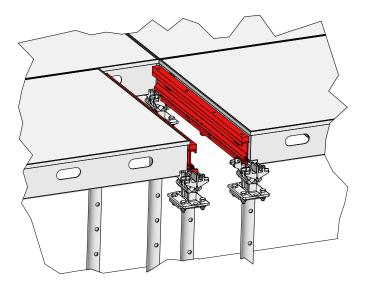


Fig. 24.3

Description	Ref. No.
MevaDec-e compensa	tion beam
210/21	22-306-10
160/21	22-306-20
80/21	22-306-30
60/21	22-306-40
40/21	22-306-50
210/27	22-306-15
160/27	22-306-25
80/27	22-306-35
60/27	22-305-45
40/27	22-305-55

Slab thickness (cm)	Length compensation with facing 21 mm (cm)
Up to 16	40
Up to 20	40
Up to 30	40
Up to 40	30
Up to 50	30

Table 24.4



Levelling

First of all, a prop with drop head must be adjusted to the required height. The MD laser support (aluminium) and laser receiver must be fitted in the groove of the MevaDec-e primary beam located near this prop and aligned with the laser transmitter that is set up to beam horizontally. It is now possible for one single person to adjust the entire slab formwork to the required height.

Note: The adjustment is made via the fine adjustment of the props (Figures 25.1 and 25.2).



Fig. 25.1

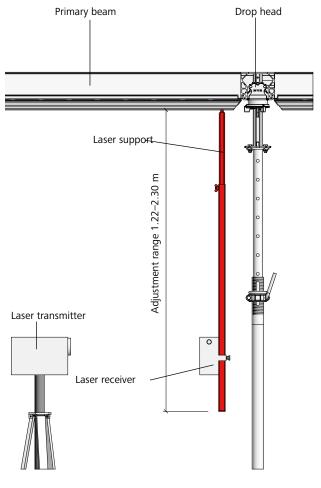


Fig. 25.2

Description	Ref. No.
MD laser support	29-302-50

MevaDec in combination with MEP

The MEP shoring system and MevaDec are mutually compatible. At formwork heights above 5.90 m (including 40 cm for the drop head) it is more economical to work with shoring towers. The MEP 300 and MEP 450 props can be used as both single props and shoring towers when reinforced with frames. They provide perfect solutions for all kind of slabs.

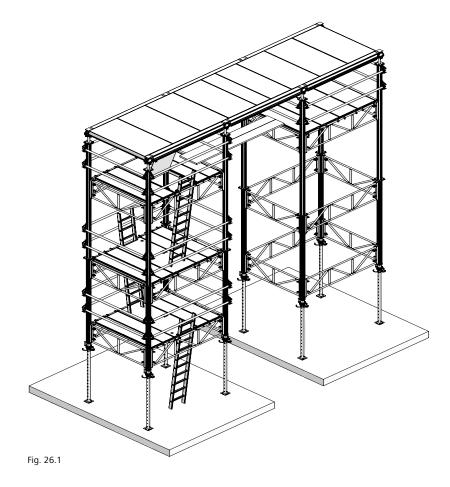
The reinforcing frames 170 and 220 match the MevaDec system dimensions, enabling early stripping when using the drop-head-beam-panel method (Figures 26.1 and 26.2).

Please observe the Technical Instruction Manual of the MEP shoring tower.

Attention

When using the MEP shoring tower in combination with Meva-Dec, make sure to

- plan diagonal cross braces for every third MEP shoring tower in a row
- → Use head spindles, if necessary.

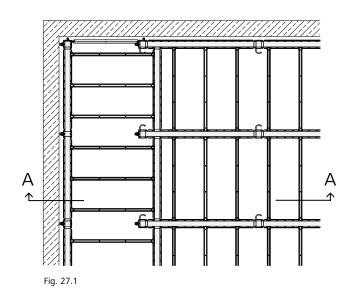


Description	Ref. No.
MEP 450 with SAS	29-907-70
MEP 300 with SAS	. 29-907-65
MEP frame 330	29-909-30
MEP frame 220	29-909-25
MEP frame 170	29-909-20
MEP frame 110	29-909-15
MEP frame 55	29-909-10
MEP extension 360	29-907-95
MEP extension 120	29-907-90
MFP extension 80	29-907-85

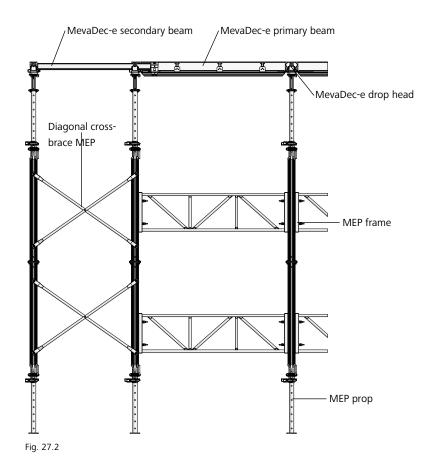
MevaDec in combination with MEP

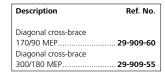
We also recommend using a spindle both at the top and at the bottom (or a MEP prop) to make it easier to level the slab formwork. This applies in particular to sloping slabs or if the ground is inclined. We recommend using a calotte support at the base of the support structure.

In compensation areas and when changing the orientation of the primary beams, the reinforcement of the height-extended MEP props is achieved using the diagonal cross-brace 170/90. It creates the connection between the lower primary-beam rows and the other primary-beam rows. Ensure that the props are all adjusted to the same height (Figures 27.1 and 27.2).



Section A - A





MevaDec in combination with MT 60

The MT 60 shoring tower is a load tower and fulfils all the requirements for working at heights.

The MT 60 can be used for heights of 2.01 m to 18.66 m (in both cases, excluding the slab formwork thickness). The clear room height including the slab formwork thickness is 19.06 m.

The load capacity per leg is up to 60 kN.

The MevaDec slab formwork (Fig. 28.1) is erected from the uppermost scaffold platform level.

Please observe the Technical Instruction Manual of the MT 60 shoring tower.

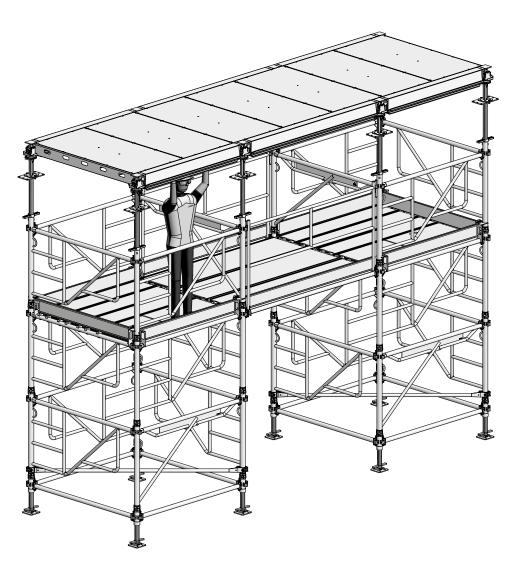


Fig. 28.1 Use as a tower to support the MevaDec slab formwork

Free slab edges

The MevaDec-e primary beams 270, 210 or 160 are used when forming free slab edges or at the end of a cycle (Fig. 29.1). The facings placed in the slab edge area must be nailed to the MevaDec-e secondary beams along the entire length of the MevaDec-e primary beam.

The MevaDec-e panels must also be attached to each other with MevaDec-e panel connectors along the entire length of the MevaDec-e primary beam.

When equipped with the MevaDec-e restraint mechanism (Fig. 29.2), the MevaDec-e panel connector can be used to anchor the slab formwork to the ground using a tensioning chain or a lashing strap (Fig. 29.3).

To do this, the restraint mechanism is screwed onto the Meva-Dec-e panel connector.

For the maximum overhang of the primary beam see Table 29.4.

Section A - A

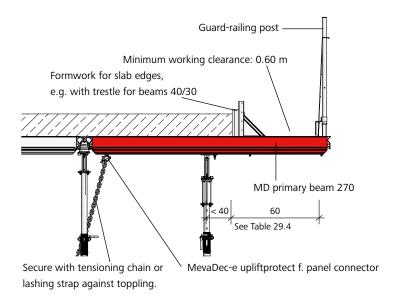


Fig. 29.1

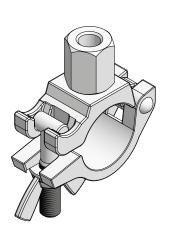
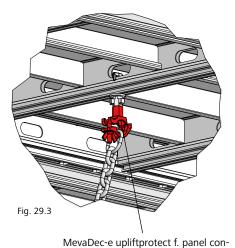


Fig. 29.2



nector screwed onto the MevaDec-e panel connector.

Description	Ref. No.
MevaDec-e	
Primary beam 270	. 22-305-50
Primary beam 210	. 22-305-55
Primary beam 160	. 22-305-60
Panel connector	. 29-303-00
MevaDec-e restraint mechan	ism

panel connector..... Trestle for beams 40/30.

Max. overhang (Lk1)	Max. overhang of concrete (slab)
PB 270 = 130 cm	40 cm
PB 210 = 70 cm	40 cm
PB 160 = 50 cm	40 cm

Table 29.4

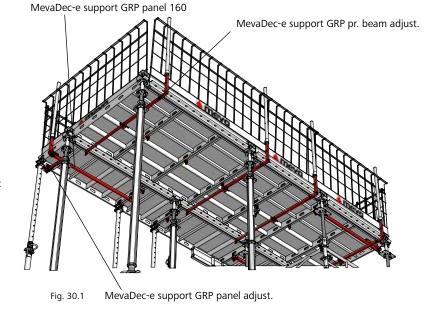
MevaDec-e support for guard-railing post (GRP)

The MevaDec-e support for guard-railing post is used to secure the slab formwork edge to prevent falling (Fig. 30.1). A MEVA guard-railing post can be attached to it in order to support a safety mesh or railing boards. The support for guard-railing post can be installed safely from below.

It is attached to the MevaDec-e primary beam with the telescopic adjustable MevaDec-e support for GRP for primary beams (Figures 30.2 and 30.5). It is secured at two positions in the profile groove on the underside of the primary beam (e = 90 cm or 170 cm) with the integrated hammer-head screws.

The MevaDec-e support for GRP for panel 160 (Fig. 30.3) and the adjustable MevaDec-e support for GRP (Fig. 30.4) are attached to the MevaDec-e panel. The MevaDec-e support for GRP for panel 160 is attached to the MevaDec-e panel using the integrated panel connector at the grip openings of the panel (Fig. 30.5).

The adjustable MevaDec-e support for GRP for panels (Fig. 30.4) is hooked onto the MevaDec-e panel in the corner of the slab edge and onto the MevaDec-e support for GRP for panel 160 (Fig. 30.6). It can be adjusted from 27 cm to 41 cm.



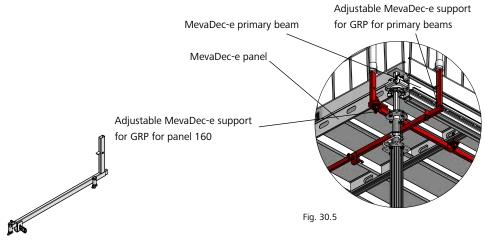


Fig. 30.2 MevaDec-e support GRP pr. beam adjust.

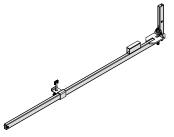
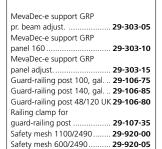


Fig. 30.3 MevaDec-e support GRP panel 160

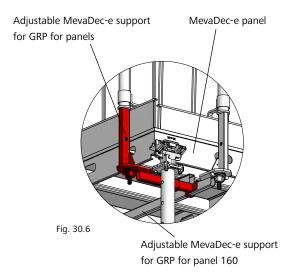


Ref. No.

Description



Fig. 30.4 MevaDec-e support GRP panel adjust.





MD stripping support

If the formwork does not lower under its own weight during stripping due to tension or a high level of concrete adhesion, the stripping support can be used to detach the primary beams from the slab.

This is done by inserting the MD stripping support into the T groove of the primary beam (Figures 31.1 and 31.2). The primary beam can be loosened and easily removed by applying pressure against the head plate of the prop (Fig. 31.3).

The MD stripping support facilitates stripping when drop heads and primary beams are used.

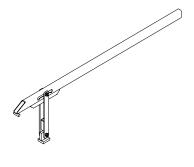
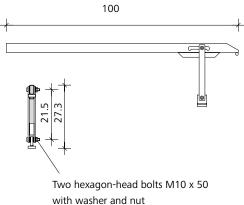
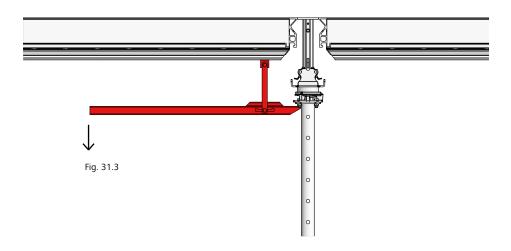


Fig. 31.1



Transport position: 112.5

Fig. 31.2



Description	Ref. No.
MD stripping support	29-302-40

Mobile aluminium scaffold

Assembly

- 1. Fold out the folding base section 100/80 1.
- 2. Insert the folding height extension 100/80 ② according to the figure so that the long sides are opposite each other and thus both stiffened.
- 3. Mount the working platform 180/80 ③ on the bars of the folding height extension 100/80 depending on the desired height.

The working platform must always be secured on all sides by a two-part side railing at the access levels and at the work levels also with all-round toe boards.

Side railing

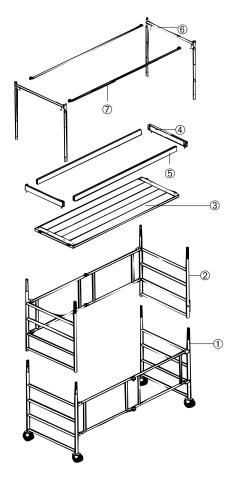
- 1. Insert end toe board 80 4 at both ends.
- 2. Insert side toe board 180 ④ at both ends.
- 3. Insert the guard-railing post of the end railing 80 [®]. Install the height-adjustable railing 80 1.00 m above the working platform and secure it with cotter pins.
- 4. Install railing 180 4 on both sides.

The following must be checked before using the mobile scaffold:

- 1. The brake lever of the swiveltype castors is in the closed position (brake lever pointing downwards).
- 2. The mobile scaffold is absolutely vertical.
- 3. The handrails are secure and the toe boards are fitted for heights above 1.00 m.
- 4. It has been completely and correctly assembled.

Operating instructions

- → The payload including persons standing on the platform must not exceed 1 kN/m² (100 kg/m²).
- → The mobile scaffold should only be used on level, well-compacted ground or, if necessary, on a robust, load-distributing underlay.
- → The scaffold should only be accessed via the ladders on the end faces.
- → It is not permitted to use lifting equipment on the mobile scaffold.
- → Do not brace yourself against the side railing when working.
- → Vacate the working platform if a storm is approaching and move the mobile scaffold to an area that is sheltered from the wind.
- → Close the brake levers of the swivel-type castors.
- → Do not use damaged scaffold components or incorrectly assembled or damaged scaffolds.
- → Damaged scaffold components or damaged swivel-type castors must be replaced with original parts.
- → Two adjacent scaffolds may only be bridged if a separate structural verification has been performed.
- → Do not move the mobile scaffold using lifting equipment.
- → Secure loose parts against falling before moving the scaffold.
- → Persons should not be located on the mobile scaffold while it is being moved.
- → The mobile scaffold must be moved slowly. Collisions of any kind are to be avoided.



- ① Folding base section 100/80
- 2 Folding height extension 100/80
- 3 Working platform 180/80
- 4 End toe board 80
- ⑤ Side toe board 180
- 6 End railing 80
- 7 Railing 180

Description	Ref. No.
Mobile scaffold 100 (aluminium)	29-905-60
Height extension for mobile scaffold	29-905-65

Mobile aluminium scaffold

Working and safety scaffolds	ls → meva	Working an	Working and safety scaffolds	meva
in accordance with DIN EN 12811 / DIN 4420 Labelling and approval	 	Inspection report	Ordinance on Industrial Safety and Health), Sections	
		10 and 11		
Scaffold assembly worker:	Construction site		Inspection	OK Not ap-
Street:	Principal Authorised person:			Yes No plicable
Can be contacted at:	Assembly date:	Scaffold components	No signs of damage	
		Stability	Load-bearing capacity of the supporting surface	
Working scaffold (DIN EN 12811) used as	1		Base spindle – extension length	
☐ Façade scaffold ☐ Birdcage scaffold	☐ Mobile scaffold		Braces/diagonals	
Safety scaffold (DIN 4420) used as:	Cafety roof		Runners – at base height	
במונים בימונים			Lattice beams – bracing	
Covering ☐ None ☐ Tarpaulins	□ Nets		Anchoring – according to assembly instructions / Technical Instruction Manual	ri.
		Planking	Scaffold levels – completely covered / planks secure	
Load classes:	7 (300 kd/m²)		System planking – including custom planking	
The sum of the working loads of all scaffold levels that li	ther in a scaffold bay must	_	Corner planking – fulfils the minimum requirements	
the above-mentioned value.	-		Scaffold planking – cross-section, support	
			Openings – between the planks	
Width class:	» C	Work and operational	Side railings – including end railings	
		safety	Distance to wall ≤ 0.30 m	
Usage restrictions:			Internal side railings	
			Access ladders, access points – distance \leq 50 m	_
			Stair tower, scaffold stairway, integrated ladder	
			Lean-to ladder ≤ 5 m	
Instructions for use:			Safety wall	
■ Modification to the scaffold must only be performed	_		Safety roof	
by the scaffold assembly worker. • Always ensure that the arress to the scaffold deck is	Aways keep the access hatch cover closed. Do not jump onto the scaffold deck.		Road safety measures – lighting	
wide enough when storing materials.		Mobile scaffolds	Casters	
■ Do not store material on safety-catch scaffolds and	Pay attention to the risk of falling between the scaf-		Ballast / width extensions	
safety roofs.	fold and the building.	Labelling	Scaffold labelling – at the access points	
 Do not overload scaffold decks and scaffold bays. Workplaces must not be located one on top of the 	 Do not endanger the stability of the scattoid through excavation work. Children are not narmitted on the scaffold 	Cordoned off areas:	Areas that are not complete have been cordoned off and marked with the prohibition sign "No unauthorised persons allowed beyond this point" .	:he
otner at the same time.	ביווומבון מנכ ווסן לאמווווונים סון נווג אמווסומי	Comments/notes:		
		1		
scanoid checked by a person aumonsed by the scanoid assembly worker.	arroid assembly worker.	Only attach label to th	Only attach label to the scaffold when no defects have been determined.	
Date	Name/signature (authorised person)	Date	Name/signature (authorised person / principal)	



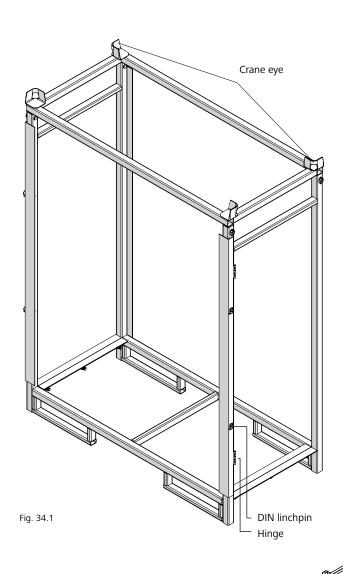
Transport

MD transport rack

The MD transport rack (Fig. 34.1) can hold a maximum of 14 MevaDec-e panels 160/80 (Fig. 34.2). Before loading the rack, the four DIN linchpins must be removed and the hinges opened out (Fig. 34.3). Two MD transport racks can be stacked on top of each other (Fig. 34.4). The crane eyes of the lower MD transport rack prevent the upper rack from shifting.

The MD transport rack can be moved by crane, forklift truck, lift

truck or on swivel-type castors.



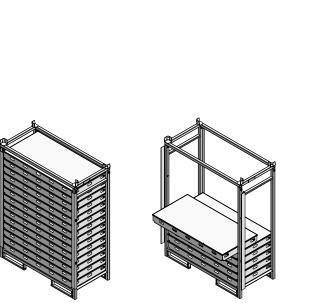


Fig. 34.3



Fig. 34.2



Transport

MD transport rack

The MD transport rack is delivered completely assembled. It can, however, be disassembled (Fig. 35.1) and then assembled as follows:

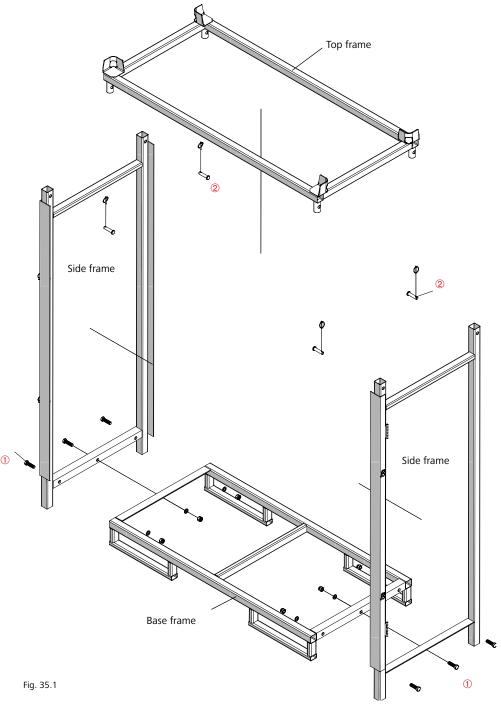
The two side frames are attached to the base frame with ①:

- → Three hexagon-head bolts M16x 55 (DIN 933)
- → Three spring washers A16 (DIN 127)
- → Three castle nuts M16 (DIN 935) on the base frame
- → Three cotter pins 4 x 32 (DIN 94)

Then the top frame is attached to the side frames and secured with ②:

- → four head bolts and
- → four DIN linchpins.

The spring washers and cotter pins must be replaced after each disassembly.



Description Ref. No.

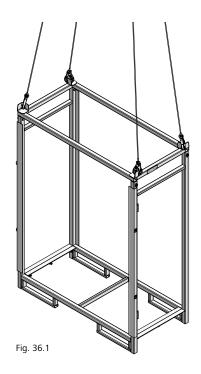
MD transport rack.....

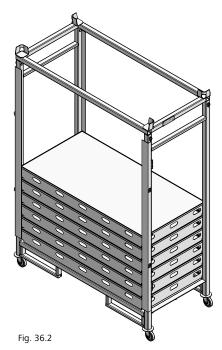
27-000-60

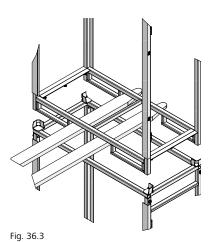
Transport

The MD transport rack can be transported by various means:

- → By crane. Ensure that no persons are located in the danger zone of the load. Use only lifting gear with lifting chains. The lifting chains must be able to move freely in the attachment point, and the hook must be secured to prevent it disengaging inadvertently (Fig. 36.1).
- → Transport on castors at ground level. The MD transport rack can also be equipped with four swivel-type castors 100 (Ref. No. 29-305-95). They must be inserted into the side frames of the empty rack. This increases the overall height by 12 cm from 231.5 cm to 243.5 cm (Fig. 36.2).
- → Transport with lift truck at ground level
- → Transport with forklift truck (Fig. 36.3)







Description	Ref. No.
MD transport rack	27-000-60
Swivel-type castor 100	29-305-95



Transport

Transport angle

The transport angles enable panel stacks to be stored in a space-saving manner without using supporting timber blocks.

Rigid and folding transport angles are available. Two rigid and two folding angles should be used per stack. This enables five to twelve panels to be moved.

The maximum load capacity per transport angle is 10 kN. For safety reasons the maximum capacity of the complete stack is 20 kN (safety factor of 2).

Castors (swivel-type castor 100) can be fitted to the transport angles 14 for transverse transport.

Fig. 37.1

The four base elements of the transport angles are pushed underneath the corners of the first panel.

Fig. 37.2

Fit the rear transport angles and commence stacking from the front.

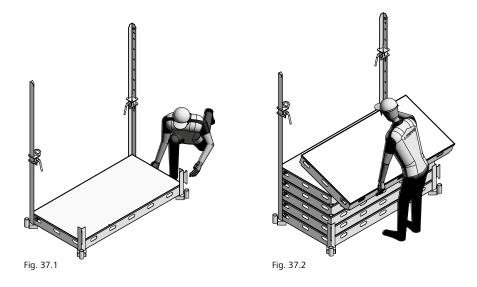
Fig. 37.3

Insert the last panel with the facing pointing downwards.

Fig. 37.4

When the stack is complete, insert the front transport angles into the base elements, open the safety lever and lift it together with the angle until it is upright. Then release the lever again.

Description	Ref. No.
Transport angle 14	29-305-30
Transport angle 14 rigid	29-305-35
Swivel-type castor 100	29-305-95



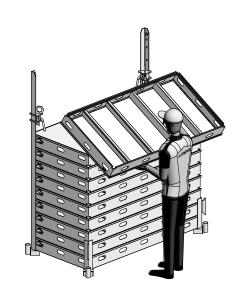
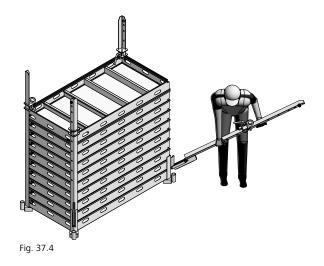


Fig. 37.3



Transport

Figures 38.1 and 38.2

The sliding part with crane eye is attached directly above the top panel so that the safety device engages in the frame corners (even if the stack is not quite full).

Attention

The safety lever must be tightly locked.

Fig. 38.3

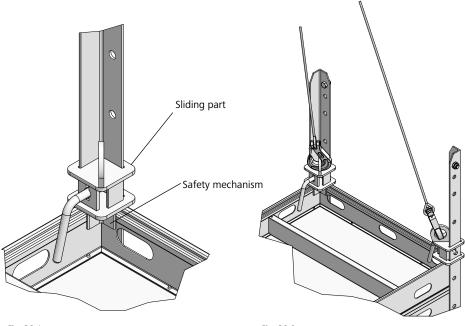
Attach the four-leg crane sling.

Fig. 38.4

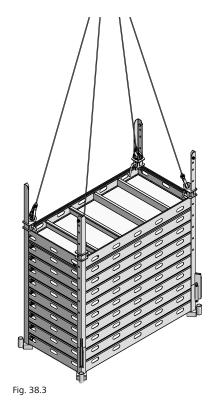
If equipped with four swivel-type castors 100, the panel stack can be moved at ground level.

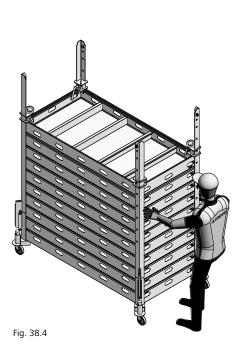
Attention

Before transporting the panels, ensure that the pins of the sliding part and the safety lever are locked.





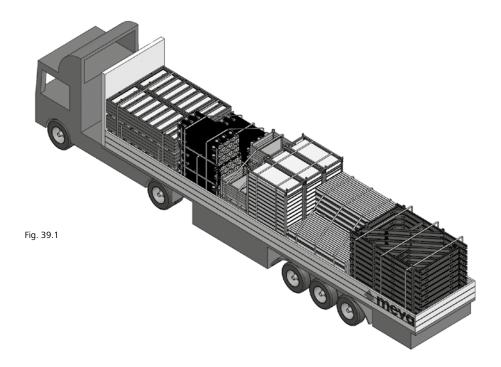






Transport guidelines

The following must be observed for road transport:
Use one ratchet strap per metre of cargo. This means that 14 ratchet straps are required for a fully loaded truck with a trailer length of 13.60 m (Fig. 39.1).





Job protocol

Job protocol based on EN 12812.

Copy this page, fill it out and store it with the construction site log.

Job protocol												
Construction company												
Construction project												
Component												
e with	Slab thickness	=	cm									
cordanc	Clearance (height)	=	m									
tion in ac	Prop length = clearance - formwork height	=	m									
verificat n drawin	Maximum prop spacing	=	cm									
This is in lieu of the EN 12812 and inst	Prop selected	=										
	Existing prop load	=	kN									
	≤ perm. prop load		kN									
	Check whether the data entered above are valid for the construction site											
	Slab thickness	=	cm									
	Maximum prop spacing	=	cm									
on-site control before pouring	Prop selected	=										
	Prop length	=	m									
	All props set up perpendicular in both axes? ≤ 1%		•									
	Horizontal attachment of formwork present in all directions?											
	Assembled parts exhibit no signs of damage?											
n-site α	Necessary tensioning equipment installed?											

Location	Date	Signature of site manager responsible

Compatibility of MevaDec

Compatibility of MevaDec-e (new generation) with MevaDec (old generation)	MD panel	MD primary beam	MD secondary beam	MD compensation beam	MD drop head ²	MD prop head (plug-in version)	MD assembly lock	MevaDec-e support for GRP for panels	MevaDec-e support for GRP for beams	MD beam stiffener	MD prop connector	MD safety claw	MD stripping support	MD cover profile	MD laser support	MD transport rack	Transport angle 14
MevaDec-e AL panels	Yes1	Yes	Yes	No	Yes	Yes	No	No	No					Yes		Yes	Yes
MevaDec-e primary beam	Yes	Yes	Yes	No	Yes	Yes		No	No	Yes	Yes	Yes	Yes	Yes	Yes		
MevaDec-e secondary beam	Yes	Yes	Yes	No													
MevaDec-e compensation beam	No	No	No	No	Yes		No										
MevaDec-e drop head (plug-in version)	Yes	Yes	Yes	Yes	Yes	Yes								Yes			
MevaDec-e prop connector lowerable panel	Yes																
MevaDec-e prop connector lowerable beam		Yes															
MevaDec-e panel connector	No			No													
MevaDec-e support GRP pr. beam adjust.	Yes	Yes															
MevaDec-e support GRP panel 160	No	Yes															
MevaDec-e support GRP panel adjust.	No																

Table 41.1

The MevaDec of the new (as of 04/2019) and the old generation (up to 04/2019) are either compatible or not compatible as defined in Table 41.1.

Yes Combination or mixed used possible No No combination possible

Panels cannot be connected to each other

Reduced capacityNo influence

Services

Cleaning

The MevaDec formwork is cleaned professionally upon return.

Cleaning and reconditioning of wall formwork

The formwork is cleaned using industrial equipment. Reconditioning is carried out as follows: The frames are checked and, if necessary, repaired, coated with a high-quality cured powder coating and provided with a new facing. As long as the formwork equipment still has its full load capacity, correct dimensions and is fully functional, reconditioning will always be a more economical solution than purchasing new formwork. Please note that the cleaning and reconditioning service is not available in all countries in which MEVA does business.

Rentals

As we have a comprehensive range of equipment in stock, we offer our customers the option of renting supplementary material at peak times. The MEVA logistics centre guarantees rapid delivery throughout Europe. We also give prospective customers the chance to test MEVA formwork so they can see its benefits for themselves in actual use.

RentalPlus

For a flat-rate fee MEVA's "fully comprehensive insurance" for rental formwork and equipment covers all secondary costs that occur after return (excludes losses and write-offs). For the customer this means: Costing certainty instead of additional

charges, an earlier end of the rental period and thus lower rental costs because you save the time required for cleaning and repairs.

Formwork drawings

Our application engineers worldwide work with CAD systems. This ensures that you always receive optimum formwork solutions and practice-oriented formwork and work cycle plans.

Special solutions

We can help with special parts, custom-designed for your project, to supplement our standard formwork systems.

Structural calculations

Generally, this is only necessary for applications such as single-sided formwork where the anchor parts are embedded in the foundation or the base slab. On request, we can perform structural calculations for such applications at an additional charge.

Formwork seminars

To ensure that all our products are used properly and efficiently, we offer formwork seminars. They provide our customers with a good opportunity to keep themselves up to date and to benefit from the know-how of our engineers.







