

## Stacking Angle 60/40/23

### Operating Instructions



MEVA Schalungs-Systeme GmbH

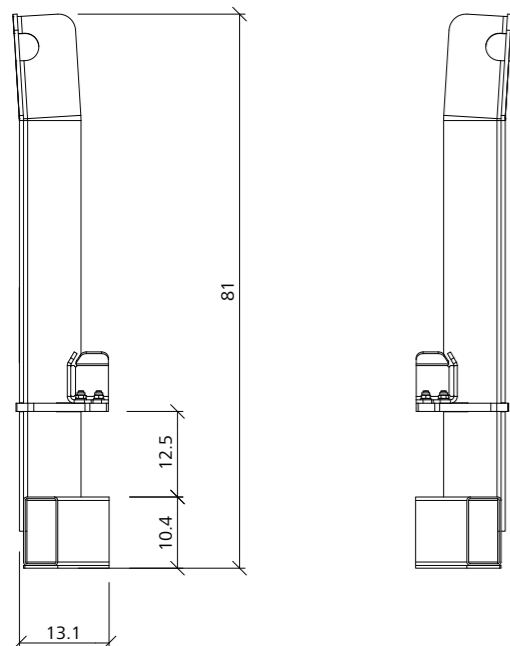
Industriestrasse 5 Tel. +49 7456 692-01  
72221 Haiterbach Fax +49 7456 692-66  
Germany info@meva.net

www.meva.net

3559 GB 04/04/2022 Printed in Germany

#### 1. Product description / technical data

Ref. no. 29-305-45, weight 9.55 kg  
Steel, galvanized. Used to stack and transport two to five wall formwork panels of the same size with frame profile widths of 60 mm, 40 mm or 23 mm. Four stacking angles 60/40/23 are required for each panel stack (for use refer to section 5). The permissible load capacity per stacking angle is 15 kN (1.5 t).



#### 2. Preventive measures and safety instructions

##### 2.1. Information about the operating instructions

- You must read the operating instructions carefully before using the stacking angle 60/40/23 for the first time and make the information provided available to all persons who are authorized to use the stacking angle 60/40/23.
- The stacking angle 60/40/23 may only be used by authorised and trained personnel in accordance with DGUV R 109-017.
- Use the stacking angle 60/40/23 only for the use described in these operating instructions. Impermissible use of the stacking angle 60/40/23 can result in damage and in extreme cases to danger to life and limb.
- When using the stacking angle, the crane rope must never be subjected to oblique pulling and the load must never be subjected to abrupt lifting or tilting strike during rotation.
- There must be no persons present below and/or on the raised load.
- The stacking angle 60/40/23 must not be used if the data plate is missing or the load capacity data is illegible. If the data plate is missing, the CE declaration and the operating instructions are no longer valid.
- The maximum load-bearing capacity for the four stacking angles 60/40/23 of a unit must never be exceeded (see section 5).
- Damaged stacking angles 60/40/23 must not be reused.

##### 2.2. Information about use

- Before using it for the first time, the stacking angles 60/40/23 must be inspected in accordance with section 6 of these operating instructions.
- Before each use, visually inspect the stacking angle 60/40/23 for damage and ensure it is complete, that moving parts are secure and that it functions correctly.
- The stacking angle 60/40/23 must only be used for its intended purpose.
- Ensure that the load is distributed evenly.
- During the lifting process (Fig. 3) ensure that the load does not swing to and fro or strike other parts. The tips of load hooks must not be subject to load and must move freely in the attachment eyelet ①.
- Loads must be picked up and set down in such a way that the load cannot fall over, fall apart, slide away or roll away unintentionally.
- There must be no load and/or persons on the units nor should anyone climb onto the units.

#### 3. Precautionary measures!



There is a risk of crushing accidents during the entire period of use.



Warning of suspended loads.  
It is not permitted to transport the load above other people.

Make sure there is nobody in the hazardous area in the vicinity of the load. Use only lifting gear with lifting chains. The load hook on the lifting chain must move freely in the attachment eyelet of the stacking angle.

Ensure that the necessary personal protective equipment required for the use of the stacking angle 60/40/23 is available and used for its intended purpose:

- Safety helmet
- Safety footwear
- Safety gloves
- Safety glasses

#### 4. Behaviour in the event of an accident – First aid



- Secure the scene of the accident
- Provide first aid
- Inform the first-aid officer and the supervisor
- Tend to the injured person(s)

#### 5. Correct use

The stacking angle 60/40/23 is used to move and store Mammut XT, Mammut 350, StarTec XT, StarTec, AluStar, EcoAs and AluFix wall formwork panels of the same size. Four stacking angles 60/40/23 are required for each application as a unit. The stacks are moved individually using a crane sling (Fig. 3) or a forklift truck. They are used as lifting devices between the crane and the load. A minimum of two wall formwork panels are to be used, whereby one panel lies on the hollow profiles ④ with the facing side upwards and the second panel lies on the plate with adjustable bracket ② located above this. A maximum of five wall formwork panels may be used for each transport unit (Fig. 3). The adjustable bracket must be bolted in the specified position (Fig. 1). A load hook of a 4-rope crane sling is attached to the attachment eyelet ① of each stacking angle. During use, the stacking angle 60/40/23 remains attached to the formwork at all times.

A maximum of three stacking units may be stacked one on top of the other for storage purposes (Fig. 5). Only panel stacks with the same dimensions may be stored one on top of the other.

#### The maximum load capacity per stacking angle 60/40/23 is 15 kN (1.5 t).

According to DGUV-R 109-017, section 4.1.2, only two strands may be considered to be load-bearing (30 kN (3.0 t)) when slinging with several strands.

This does not apply if it has been ensured that the load is distributed evenly over further strands or if the permissible loading of the individual strands is not exceeded in the event of an unequal load distribution (max. 45 kN (4.5 t)).



The installation may only be performed by trained personnel who possess the necessary knowledge and skills (in accordance with the applicable national regulations).



Only material that is in perfect condition may be used. Ensure that damaged parts cannot be reused.

#### 5.1 Installation of the stacking angle 60/40/23

Set the adjustable bracket ② on the stacking angle 60/40/23 to suit the panel frame width in question (EA/AF = 23 mm, AS/ST/ST XT = 40 mm, M / M 350 / M XT = 60 mm) (Fig. 1). Insert a stacking angle 60/40/23 at each corner of the wall formwork panel so that the panel lies on the supporting surface ④ with the facing side upwards (Fig. 6). This protects the facing when it is being moved by a forklift truck.

Place the next panel into the correspondingly set adjustable brackets ② from above (Fig. 2). The second panel secures the stack, which can now be moved.

#### Important

Before use, check the stacking angle 60/40/23 for damage. Profiles and welds in the area where the stacking angle 60/40/23 is attached must be free of damage. Furthermore, the attachment point on the wall formwork panel must be free of contamination.

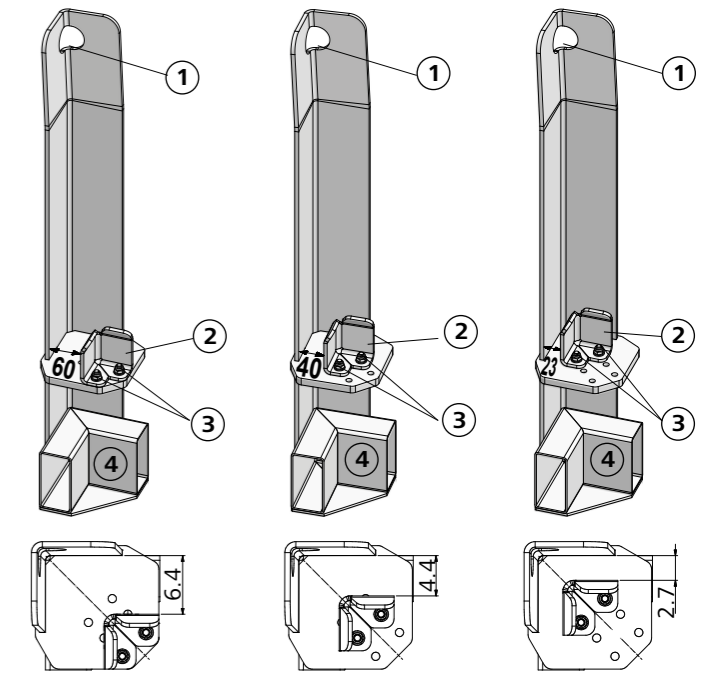


Fig. 1

Mammut XT (M XT), Mammut 350 (M 350), Mammut (M)  
StarTec XT (ST XT), StarTec (ST), AluStar (AS)  
EcoAs (EA), AluFix (AF)

- ① Attachment eyelet
- ② Plate with adjustable bracket
- ③ Countersunk bolt with hexagonal nut M8
- ④ Hollow profile as support

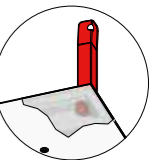


Fig. 2

#### 5.2 Avoidable misuse



- The total load capacity must not be exceeded (see section 5). The opening angle of the crane sling must not exceed 60° (Fig. 4).
- The stacking angle 60/40/23 must be installed at a position suitable for taking up a load. The ground should be even, slip-resistant and capable of bearing the load.
- Always use four stacking angles 60/40/23 to form one transport unit.
- The adjustable bracket ② must always be set to suit the wall formwork panel in question.
- All bolts ③ must be installed in the plate with adjustable bracket.
- A transport stack must always consist of two to five wall formwork panels.
- The lifting tackle must be approved for the total load capacity of 45 kN (4,5 t).

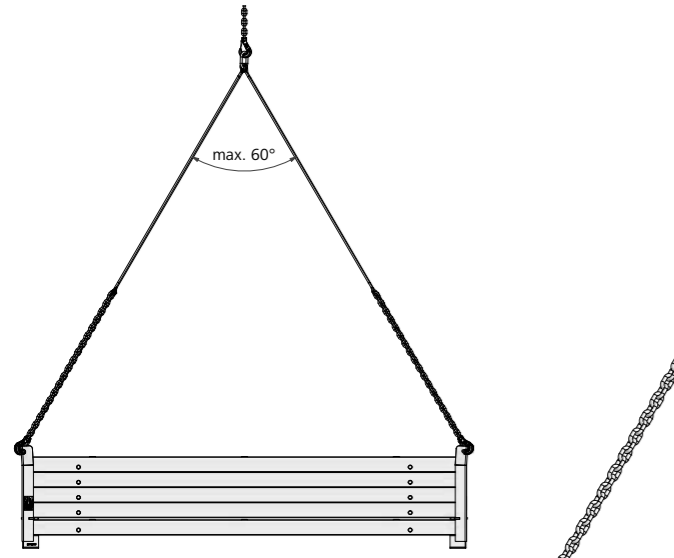


Fig. 3: maximum opening angle 60°

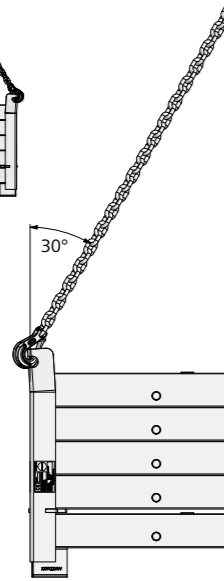


Fig. 4: maximum of five wall formwork panels per transport unit

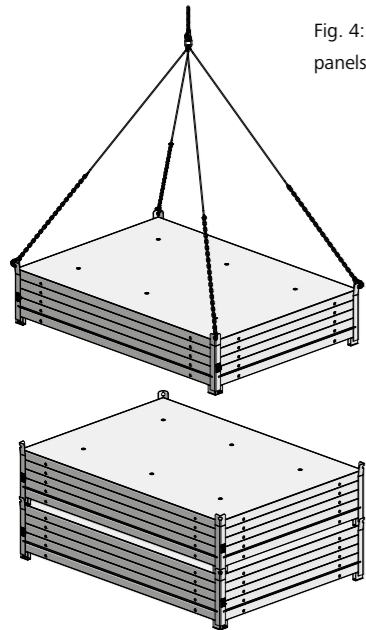


Fig. 5: a maximum of three identical stacks of wall formwork panels may be stored one on top of the other.

### Attention



Persons must never be located on the panel stack when this is being moved or is suspended. Furthermore, ensure that there are no loose objects on the unit when it is being moved.

### In all phases of use



- Injuries to hands and fingers can occur due to sharp edges on the unit.
- The stack can strike you or other persons.

### 5.3 Crane ganging

The stacking angle 60/40/23 may only be used under the supervision of a person with the necessary expertise and by suitably qualified persons. These persons must receive appropriate training in the work to be carried out with regard to specific hazards.



Attach the crane sling's load hook to the attachment eyelet ① on the stacking angle 60/40/23 so that it cannot slide out of the eyelet when a rope or chain is slack (Fig. 4).

### 6. Inspection and maintenance

#### 6.1 Inspection before first use

The stacking angle 60/40/23 underwent a final inspection before leaving the factory and is suitable for the corresponding usage. However, before being used for the first time, the stacking angle 60/40/23 must be checked by a specialist for any damage that has occurred during transport or due to other causes.

#### 6.2 Inspection

The stacking angle 60/40/23 must be visually inspected before every use in accordance with the applicable national industrial safety regulations for damage, deformation, corrosion, and cracked welds or incipient cracks in welds, etc. Ensure that the stacking angle 60/40/23 is complete and that moving parts are secure, and check it for correct function and wear. Damaged products must not be reused.

The data plate (Fig. 7) and the load capacity data must be present and legible.

### Important

Before installing the stacking angle 60/40/23, inspect the wall formwork panel for damage. Profiles in the corner of the stacking angle 60/40/23 must be free of damage. Furthermore, the attachment points on the wall formwork panels must be free of contamination. Any necessary repairs must be performed by MEVA.



During the use of the stacking angle 60/40/23, the following must be observed:

- Any contamination such as concrete residue or similar soiling on the stacking angle 60/40/23 and on the wall formwork panels must be completely removed.
- Check the bolts ③ in the adjustable bracket ② for damage.
- Use the stacking angle 60/40/23 in such a way that the lifting device, the lifting tackle and the load cannot accidentally disengage.
- The load capacity per stacking angle 60/40/23 of 15 kN must not be exceeded (see section 5)
- .
- Ensure that no persons are located in the danger zone.
- Ensure that the ground is even and capable of bearing the load.
- Remove all loose parts.
- If defects are determined, the stacking angle 60/40/23 is to be disposed of correctly (see section 10).

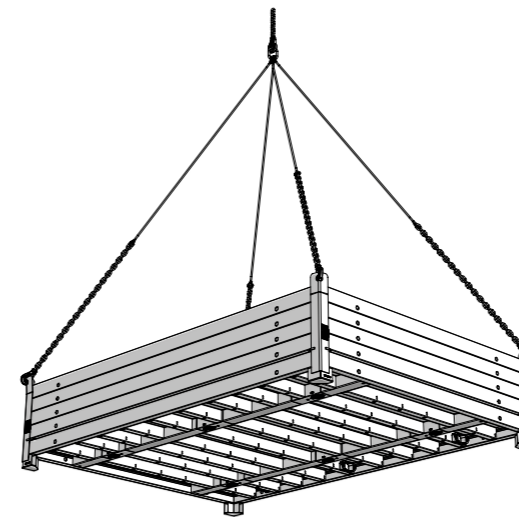


Fig. 6

### 6.3 Extraordinary inspection

According to DGUV R 109-017, the stacking angle 60/40/23 must be subjected to an extraordinary inspection performed by a specialist after cases of damage or exceptional occurrences that can influence the load-bearing capacity and also after repairs. Accessories must be checked in accordance with their specific inspection requirements.

### 6.4 Maintenance

Any contamination such as concrete residue or similar soiling on the stacking angle 60/40/23 and on the wall formwork panel must be completely removed.

### 7. Repairs

Repairs must be carried out by the manufacturer and the stacking angle 60/40/23 may only be used in its original condition. MEVA assumes no liability for modified products.

### 8. Data plates and maximum load capacity

The maximum load capacity of each stacking angle 60/40/23 is: **15 kN (1.5 t)** see section 5.

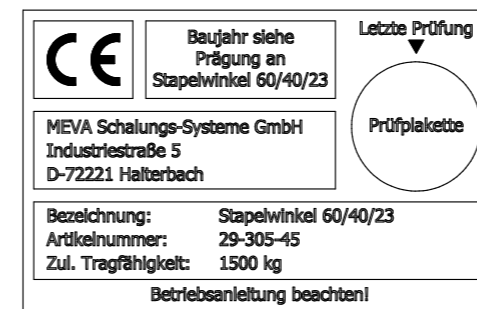


Fig. 7 Data plate

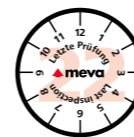


Fig. 8 Example inspection plaque



The stacking angle 60/40/23 must not be used if the inspection plaque is missing or illegible (Fig. 8).

### 9. Storage

Ensure that the stacking angle 60/40/23 is stored so that it is suitably protected against the effects of weather and aggressive substances insofar as these have a negative influence on safety.

### 10. Disposal

Render the stacking angle 60/40/23 unusable before disposal. After use, dispose of this product in accordance with the laws and regulations that apply in your country.

### 11. Information for users

- In countries other than Germany observe the currently applicable national regulations and standards!
- If no country-specific regulations are available, we recommend that you observe the German regulations.
- A person with the necessary expertise must be present when the stacking angle 60/40/23 is being used.



**Failure to comply with the information provided above will result in the loss of entitlements within the scope of the product liability as well as warranty entitlements.**

### Declaration of Conformity for the purpose of the directive 2006/42/EC

Producer	Person based in the community, who is authorised, to collect the relevant technical documentation:
MEVA Schalungs-Systeme GmbH Industriestraße 5 72221 Halterbach GERMANY	Dr. Olaf Leitzbach MEVA Schalungs-Systeme GmbH Industriestraße 5 72221 Halterbach GERMANY

states explicitly, regarding the product

- product description: Stacking angle 60/40/23
- ref.-no.: 29-305-45

which this declaration refers to, the appropriate regulations of the following EC-directive are considered:

- 2006/42/EC Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast)

Source of the applied harmonized standards according to article 7 paragraph 2:

- DIN EN 13155:2009-08 Cranes – Safety – Non-fixed load lifting attachments
- DIN EN ISO 12100:2011-03 Safety of machinery – General principles for design – Risk assessment and risk reduction
- DIN EN ISO 20607:2019-10 Safety of machinery – Instruction handbook – General drafting principles