PACKAGING, TRANSPORT AND STORAGE
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1 Packaging, Transport and Storage

1.1 Packaging for Truck Transport

For truck transport, the standard and above-standard packaging methods are available. The above-standard packaging (B) is used for markets with a less-developed transport infrastructure. The above-standard packaging is also recommended for multiple transhipments of packages and special requirements at the construction site. When it is required that the internal colored surface of panels is also protected by a self-adhesive protective film, these can be supplied in above-standard packaging.

The packaging type should be selected in accordance with the instructions, the available means of transport and the requirements at the construction site.

Data about the packaging has to be given when an order is placed or latest when specifications of panels are submitted.

Method of stacking (turning) panels in a package can be done by:

0   without turning the panels
1   turning of odd-numbered panels 1, 3, 5, 7 ...
2   turning of even-numbered panels 2, 4, 6, 8 ...
3   turning of the first panel
4   turning of the last panel
5   turning of the first and the last panel
6   turning of odd-numbered panels and the last one
7   turning of the odd-numbered panels without turning the last one
8   turning of all the panels
9   turning of all the panels, but the last one

CAUTION: specific types of panels requests specific type of turning.

The instructions attached to packages has to be followed when unloading, loading and transhipment panels (See Annex 1).

If there is any handling (unloading, loading, transhipment) of panel packages, it is necessary to follow the instructions supplied with the packages (see Annex 1).

Packages of panels are always wrapped in a stretch foil with a double overlap. A PE film always covers front and top sides of a package. Cardboard or a PE-HD film and corner protection elements can be added on the top of a package and edges. A 15-mm Styrofoam layer is always placed on the bottom of a package. Additional reinforced pallets, lifting bands and additional specificities of packaging are determined under consideration of a product and logistics.

In both of the packaging methods, packaging incorporating lifting bands for unloading is possible at the request of the purchaser. In the case of FTV panels with a width of 1200 mm, the lifting bands for unloading are obligatory, unless in they are unloaded from the side of the truck.
A protective standard transparent film on sheet metal has to be removed within three months from the take-over of goods in a warehouse. If goods are stored for a longer period of time (from 3 to 12 months) special protective films (B/W adhesive based on neoprene) are recommended.

- When packages are stored outdoor (longer than 1 month) it is necessary to wrap the packages in a PE+HD film. Cardboard is not suitable, because of the condensate.
- Packages stored outdoor have to be covered by tarpaulin.
- Dimensions of packages must be in a ratio 1.5:1 (height: width of a package). The maximum height of total packages is 2800 mm.

Packaging of panels of various lengths:
- maximal difference in length between the shortest and the longest panel in package is 1000 mm,
- one but the last panel in a package can be shorter than the bottom panel by maximally 200 mm and has to be placed on a minimally 100 mm Styrofoam.

A. Standard Packaging

Panels are packaged in packages with a height of up to 1320 mm. Panel package is placed on a Styrofoam base with a height of 90 mm. The external colored surface of the panels is protected with self-adhesive protective film, which is removed during the assembly of an individual panel. The protective film is not placed on the internal surface of the panels. Each package is wrapped water-tight using a stretch machine and packaging film, while the package fronts are protected by PE film.

The maximum dimensions of the packages, including the packaging:
- Max. width: 1230 mm
- Max. height: 1320 (1350) mm
- Max. length: 13200 (13400) mm for standard transport. Nonstandard transport 13400 - 14200 mm
- Max. weight: 3500 kg
B. Above-Standard Packaging

Panels are packaged in packages with a height of up to 1320 mm (1350). A panel package is placed on a Styrofoam base with a height of 90 mm. The external and internal colored surface of the panels is protected with self-adhesive protective film, which is removed during the assembly of an individual panel. Each package is protected with cardboard corner pieces (only module 1200 mm) and wrapped water-tight using a stretch machine and packaging film.

Cardboard corner elements are used only for module 1200 mm, where demanding handling is expected during unloading from a truck on a construction site and when a destination exceeds 1500 km.

The maximum dimensions of the packages, including the packaging:
• Max. width: 1240 mm
• Max. height: 1320 mm
• Max. length: 13200 (13400) mm for standard transport. Nonstandard transport 13400 - 14200 mm
• Max. mass: 3500 kg
Fig. 6: Packaging elements

H = package height, dependant on the number and thickness of the panels in a package
A = package width, dependant on the type and width of the panel

<table>
<thead>
<tr>
<th>Panel type</th>
<th>Module Width</th>
<th>Package Width</th>
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<tr>
<td>Trimoterm FTV</td>
<td>1000 mm</td>
<td>1030 mm</td>
</tr>
<tr>
<td>Trimoterm SNV</td>
<td>1000 mm</td>
<td>1100 mm</td>
</tr>
<tr>
<td>Trimoterm INVISIO FTV-HL</td>
<td>1000 mm</td>
<td>1100 mm</td>
</tr>
<tr>
<td>Trimoterm FTV-HL</td>
<td>1200 mm</td>
<td>1240 mm</td>
</tr>
</tbody>
</table>

Truck loading width: max. 2480 mm!

Fig. 7: Packaging with lifting bands

CAUTION: Lifting bands for single use are exclusively intended for a single transfer of a load from the production to a customer and then they eliminated from use after that.

Fig. 8: Additional reinforcement pallets on the place of forks of a fork-lift truck

Reinforced pallets on the place of forks of a fork-lift truck are used when unloading of packages longer than 8 m is foreseen by a fork-lift truck or by a narrow forks of a fork-lift truck.
1.2 Packaging in Wood (For Wagon)

Usually, packaging in timber is used for rail transport and combined transport (wagon-truck). Timber
packaging is available in standard and above-standard versions. **The standard packaging** (A) includes a wooden
frame as well as a bottom and cover made out of boards. **The above-standard packaging** (B) also has reinforced
wooden packaging on the side of the package. It is used for multiple transhipments, special requirements at
the construction site or at the request of the purchaser. When it is required that the internal colored surface
of panels is also protected by self-adhesive protection film, this can be supplied in above-standard packaging.

The packaging type should be selected in accordance with the instructions, the available means of transport
and the requirements of the construction site.

If there is any handling (unloading, loading, transhipment) of the panel packages, it is necessary to follow
the instructions supplied with the packages (see Annex 1).

The specified marks is applied to wood packaging material in accordance with standard ISPM 15.

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**A. Standard packaging:**

The maximum dimensions of the packages, including the packaging:

- Max. width: 1230 (train 1280) mm
- Max. height: 1340 mm
- Max. length: 14200 mm (in combination with Truck Transport 13200 [13400] mm for standard transportation.
  Nonstandard transport 13400 - 14200 mm)
- Max. mass: 3500 kg

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B. Above-standard packaging (reinforced)

The maximum dimensions of the packages, including the packaging:
- Max. width: 1230 (train 1280) mm
- Max. height: 1340 mm
- Max. length: 14200 mm (in combination with Truck Transport 13200 (13400) mm for standard transportation. Nonstandard transport 13400 - 14200 mm)
- Max. mass: 3500 kg

* CAUTION when panels are transported by a truck, as a truck is 2480 mm wide. Only one stack can be loaded on a truck. (The second stack can be conditionally placed on a side).
1.3 Packaging for Transport in Containers (ship)

Packaging for sea transport is adjusted to the type of panels. Packages are pushed or drawn from a container on adjusted pallets (sledge).

Note: lifting bands should be used for loading.
Container dimensions:

<table>
<thead>
<tr>
<th>TYPE 40FT STANDARD [m]</th>
<th>External</th>
<th>Inner</th>
<th>Door</th>
</tr>
</thead>
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<tr>
<td></td>
<td>Length</td>
<td>Width</td>
<td>Height</td>
</tr>
<tr>
<td></td>
<td>12.2</td>
<td>2.44</td>
<td>2.59</td>
</tr>
</tbody>
</table>

Max. weight of two packages is **3500 kg** and height 2020 mm. The ratio of height to width of a package is 1.5 : 1. A combination with turning of a package on a side is possible, where the panels are packed in a wooden box.

**CAUTION:** Lifting of two packages at the same time is not allowed.

### 1.4 Packaging for Air Transport

It is used for small quantities (samples). The dimensions and the weight has to be minimal. The dimensions should be harmonised from case to case.

### 1.5 Transport and handling

The transport of Trimoterm construction panels to the site of assembly is conducted using trucks, though partially by wagons or ship as well. Cargo must be appropriately fastened to the means of transport using textile bands.

For the transfer of packages, it is possible to use a lifting device or a mobile crane. For packages shorter than 8 m, it is also possible to use a forklift. It is not permitted to move or push packages with the tips of forks. When transferring packages with a lifting device, it is not permitted to use steel ropes. It is necessary to use load bands with an appropriate load capacity.

When lifting, it is necessary to ensure that the centre of gravity is situated between the forks or the load bands. **Only one package may be transferred at a time.**

When unloading from a truck, the truck tarpaulin must be uncovered and the support framework must be removed to such an extent that the panels cannot be damaged upon lifting.

**Transfer by forklift is only permitted for package lengths of up to 8 m:**

<table>
<thead>
<tr>
<th>Package Length</th>
<th>Fork Width</th>
<th>Gap between the Forks</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 m</td>
<td>Min. 120 mm</td>
<td>Min. 1200 mm</td>
</tr>
<tr>
<td>8 m</td>
<td>Min. 150 mm</td>
<td>Min. 2100 mm</td>
</tr>
</tbody>
</table>

Fig. 21: Transfer by forklift
It is obligatory to lift packages with lengths of above 8 m with a load carrier or a 4-point lifting harness with a length of 6 m.

![Fig. 22: Lift packages with a load carrier](image)

![Fig 23: Lift packages with 4-point lifting harness](image)

Only one package may be lifted at a time!
It is obligatory to use a spacer when unloading with the help of load bands. The spacer is not supplied with the package.
1.5.1 Attachment for Transport

**A. ATTACHMENT FOR TRUCK TRANSPORT**

It is necessary to fasten the packages to a truck using textile bands at a maximum distance of 3 m or in accordance with the laws of the respective country (the liability for performance lies with the transport operator). It is not allowed to use steel ropes or wires for attachment. Under each band, it is necessary to place a board with thickness of 5 mm and a width of min. 15 cm over both packages. Textile bands should be placed at the point of the Styrofoam lining. When tightening the textile bands, it is necessary to check the contact between the board and the upper panel of the package. It is necessary to ensure that the sheet metal of the upper panel is not deformed. During transport, the driver must occasionally (at least every 300 km) check the stability of the cargo on the truck, as well as the firmness of the bonds. If the bonds are loose, it is necessary to appropriately tighten them again.

*When unloading, it is necessary to consistently follow the handling instructions supplied with the package. Failure to do so may cause an injury or damage.*

**Fig. 24: Attachment for truck transport**

![Attachment for truck transport diagram](image)

**B. ATTACHMENT FOR WOODEN PACKAGING - WAGON TRANSPORT**

The packages on the wagon must be tied together as well as to the means of transport - the wagon. The packages should be tied to each other using a steel band at a distance of approx. 3 m, i.e. each package is to be tied at least twice. Small packages have to be tied together and secured against movement. The packages are fastened to a wagon using textile bands or wire. When using wire, corner protection with dimensions of approx. 15 cm x 15 cm should be placed under the package at the edges. It is necessary to ensure that the upper panel is not deformed.

*When unloading, it is necessary to consistently follow the handling instructions supplied with the package. Failure to do so may result in injury or damage.*

**Fig. 25: Attachment for wagon transport**

![Attachment for wagon transport diagram](image)
1.6 Storage

When storing Trimo construction panels, it is necessary to observe the following:
- Packages are stored on an even, reinforced, dry and clean surface. Any damage caused to a protective foil is to be remedied or the entire package is to be covered by tarpaulin. It has to be provided that water does not penetrate the package during storing!
- Condensate is to be left from the package by cutting the foil on the bottom side.
- Sand from the bottom side of the package has to be removed when packages are transhipped.
- **The protective foil on the sheet metal has to be removed within three months from the delivery of goods on a construction building site.** In case of storing panels for a period longer than 3 months, **packaging has to be adjusted.**
- When an individual panel is removed or when a package is stored outdoor longer than one month it is necessary to protect the package by tarpaulin. An open package has to be closed / tied again before transferring it (in order to prevent sliding of panels).
- Total packages height is max. 2.8 m

Fig 26: Arranging of stacks for storing

Low stacks

High stacks

1.7 Actions to be Taken in the Event of Damaged Packages

Delivered goods has to be checked for any possible damage caused during transport before unloading. A recipient shall write down its name legibly on a delivery note or CMR. A recipient has to write down any visible damage in delivery note and take the picture of damaged goods immediately before unloading, when they are still on a truck.

Complaints for visible defects that are submitted contrary to the instructions stated above shall not be dealt with. The panels complained about have to be available until the complaint is resolved.

1.8 Annex

a. Instructions for acceptance, unloading and storage
b. Panel handling instructions
c. Installation instructions/guide
ANNEX 1: INSTRUCTIONS FOR ACCEPTANCE, UNLOADING AND STORAGE

ACCENTIONS OF GOODS:
The recipient should write their name legibly in the delivery note or CMR. Before unloading the goods delivered, they are to be inspected for any possible damage caused during transport. Any damages caused during transport or other visible defects are to be written in the delivery note, photographed and immediately reported to Trimo. Damaged goods have to be photographed on the delivery note while the goods are still on the transport vehicle. Subsequent complaints relating to visible defects that are not in accordance with the instructions above will not be dealt with.

UNLOADING:
Unloading and transfer by a fork truck is permitted only if individual packages are up to 8 m long (Fig. 2). Packages longer than 8 m should be unloaded by a forklift truck. Packages, which are still on the transport vehicle, are to be written in the delivery note, photographed and immediately reported.

STORAGE:
Packages are to be stored on a straight, stable, dry and clean supporting surface. Ensure that packages are drained and dry before being fully covered with a tarpaulin. The maximum height of stacking is 2.8 m. The protective foil needs to be removed from both sides of the panel within three months since the take-over at the building site. The protective film has to be completely removed from the panel surface within one week. After that use a detergent and cloth to wipe off any remaining adhesive residue on the surface.

COMPLAINTS WILL NOT BE DEALT WITH IF THE ABOVE MENTIONED INSTRUCTIONS HAVE NOT BEEN FOLLOWED! EVERY DEVIATION SHOULD BE REPORTED IN 3 DAYS.

PACKAGING, TRANSPORT AND STORAGE – TECHNICAL DOCUMENT | EN | VERSION 7 | DECEMBER 2015

DE

ANNEX 1: INSTRUCTIONS FOR ACCEPTANCE, UNLOADING AND STORAGE

WARENÜBERNAHME:

ABLADELN:
Mit dem Gabelstapler ist es zulässig, jeweils nur ein Paket der Länge bis zu 8 m abzuladen und zu transportieren (Abb. 2). Die längeren Pakete bis 8 m sind mit dem Kran abzuladen. Bei der Abladung mit dem Kran ist verbindlich die Verwendung von Hebemailern entsprechend der Tragkraft sowie eines Lasttragseils der Länge 4 bis 5 m (Abb. 4) oder eines 4-Bügel-Hebegartes der Länge 6 m (Abb. 5) unter die Hebemailer zu legen. Die Ladebänder sind ausschließlich für den einmaligen Gebrauch im Rahmen der Übergabe von Waren von der Produktion zum Verbraucher konzipiert. Danach sollen sie aus dem Verkehr gezogen werden.

LAGERUNG:

REKLAMATIONEN SIND AUFZIEHN, WENN DAS NICHT IN Übereinstimmung mit den vorwiegend festgehalten Anweisungen vorgenommen wurde. In diesem Fall sind die Waren innerhalb von 3 Tagen zu ersetzen. Bei der Montage sind Montagehinweise der Trimo-Produkte zu beachten! BEI NICHTBEACHTUNG DER OBERFLÄCHENPRÜFUNG BESTEHT KEIN REKLAMATIONSAUSSCHLUSS. JEGELICHE ABWEICHUNG IST INNERHALB VON 3 TAGEN ZU ersetzen!
NAVODILA ZA MANIPULACIJO PANELOV
PANELS HANDLING INSTRUCTIONS
HANDHABUNGSANLEITUNG DER PANELE

Pravilno odvzemanje panela / Proper unloading of panels /
Ordnungsgemäße Paneelabladung

Nepravilno odvzemanje panela / Improper unloading of panels /
Nichtordnung sgemäße Paneelabladung

Rob zgornjega panela poškoduje spodnji panel (PRASKE) /
By lifting the panel on the top with the improper move the lower steel sheet of this panel can scratch the upper steel sheet of the panel bellow. You need to be careful.

Kante des oben aufliegenden Paneels kann das darunter liegende Paneel beschädigen (KRATZER)

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E: TRIMO@TRIMO-GROUP.COM
W: WWW.TRIMO-GROUP.COM
1. Each package is clearly marked with the content and panel installation references (markings). / Jedes Paket wird klar mit dem Inhalt und den Positionsbezeichnungen der Montage-Reihenfolge gekennzeichnet. / Vsak paket je jasno označen z vsebino in pozicijskimi oznakami vrstnega reda montaže.

2. Each panel is clearly marked with individual panel installation references. / Die Panele sind mit den Positionsnummern entsprechend den Positionen in den Verlegeplänen auf der Verpackung angeführt. / Vsak panel je jasno označen s posameznim pozicijskim oznakom vrstnega reda montaže.

It is contractor’s responsibility to strictly follow the sequence of installation of the panels against the Elevation drawings! / Das Montageunternehmen ist für die Einhaltung der Montagereihenfolge gemäß den beigestellten Verlegplänen verantwortlich! / Montažno podjetje je odgovorno, da sledi vrstnemu redu montaže skladno z dispozicijsko risbo v načrtih!

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