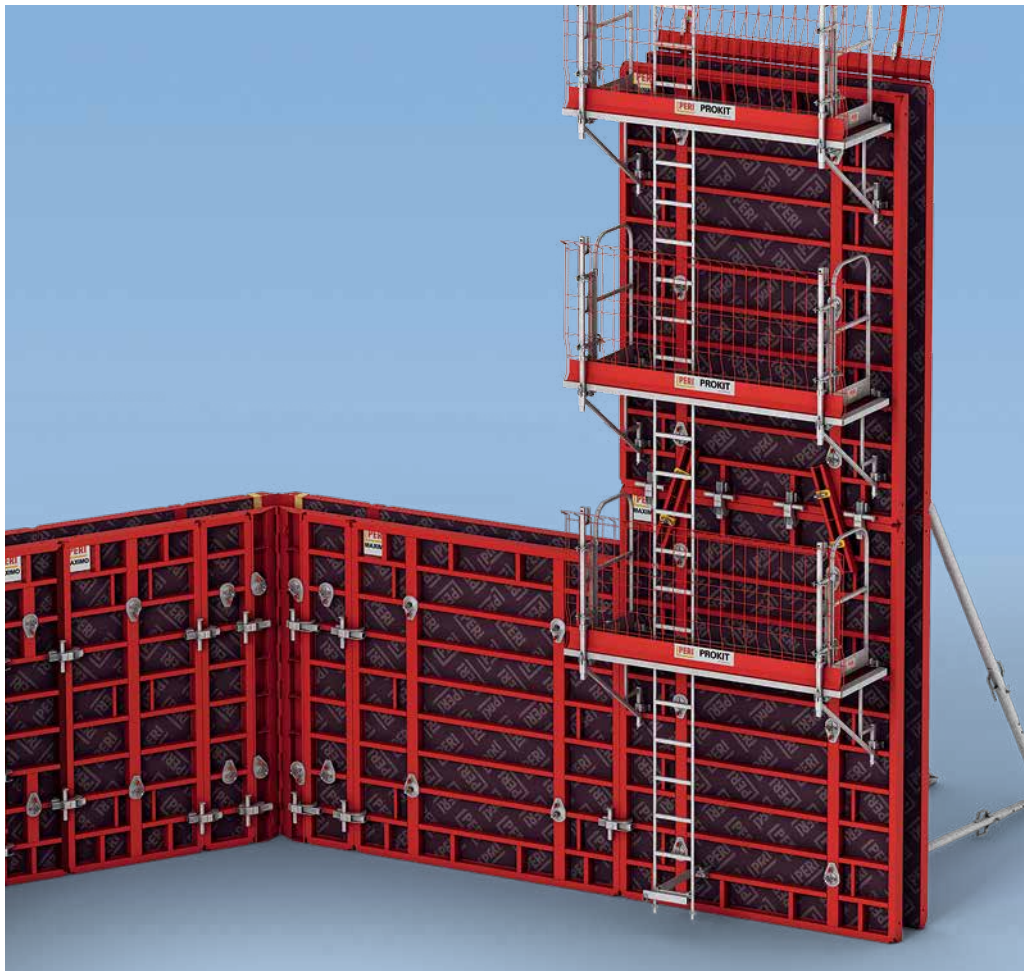


# Quality Criteria for Rental Materials

## MAXIMO / TRIO Panel Formwork

PERI Rental Service – Issue 09/2018



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## **Delivery and return of materials**

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### **Important information**

All current safety regulations and guidelines applicable in those countries where our products are used must be observed.

The photos shown in this brochure feature construction sites in progress. For this reason, safety and anchor details in particular cannot always be considered as conclusive or final. These are subject to the risk assessment carried out by the contractor.

In addition, computer graphics are used which are to be understood as system representations. To ensure a better understanding, these along with the detailed illustrations shown have been partially

reduced to show only certain aspects. The safety installations that may not be shown in these illustrations must nevertheless still be available. Please note that the systems or items shown might not be available in every country.

Safety instructions and load specifications are to be strictly observed at all times. Separate structural calculations are required for any deviations from the standard design data.

The information contained herein is subject to technical changes in the interests of progress. Errors and typographical mistakes reserved.

## The PERI Rental Service

**PERI has clearly defined quality criteria regarding the condition of the rental material for deliveries and returns. These quality criteria serve to avoid any complaints and result in excellent cost transparency.**

**This brochure contains information on:**

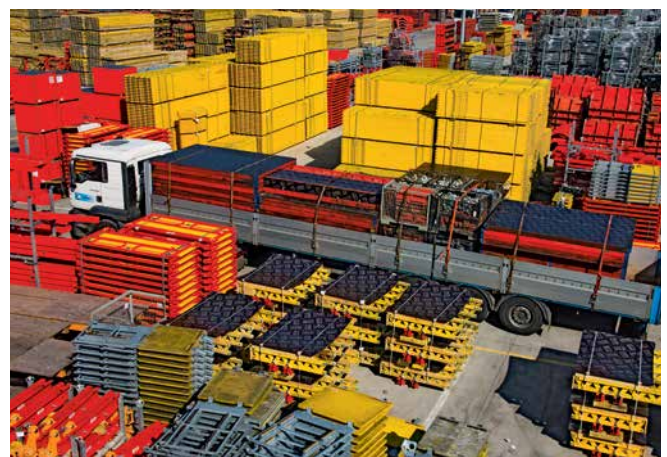
- the kind of material damage that meets the PERI quality criteria and those types that do not
- how the materials are safely and efficiently loaded, i.e. space-saving, onto the truck
- how the materials are optimally used, treated, cleaned and stored on the construction site
- how the materials can be prepared for on-time return deliveries to PERI
- which type of standard packaging is to be used for the materials

**Compliance with the tips and guidelines provides numerous advantages such as:**

- reduced costs (cleaning, repair, scrap, missing material, freight)
- reduced safety risks
- increased efficiency on the jobsite
- accelerated handling on the jobsite



Type of damage / cleaning	Included in the rental price	Not included in rental price
Wear and damage as a result of proper use	■	
Mechanical damage to the materials caused by improper use		■
Final cleaning of the materials by PERI after pre-cleaning by the user on the construction site	■	
Cleaning contaminated materials that do not meet the requirements for a final cleaning procedure		■



## Damage included in the rental price

Repairs / final cleaning by PERI, without charge



Damage  $\leq$  1 mm deep



Nail holes (nailed at the front)



## Damage not included in the rental price

Repairs / replacement carried out by PERI, costs will be billed



Damage  $>$  1 mm deep



Nail holes (nailed at the rear)



Damaged caused by the use of a concrete vibrator





Holes <math>\lt; \varnothing 35 \text{ mm}</math>



MAXIMO Removable Sealing is torn



Holes >math>\gt; \varnothing 35 \text{ mm}</math>  
■ Sheet replaced



Damage caused by the effects of heat  
■ Sheet replaced



Non-removable dirt  
■ Sheet replaced



Damage to end profile due to incorrect use of the crane hook



Holes in profile  $\leq \varnothing 3 \text{ cm}$



Kink in the perforated strut



Sleeves of the perforated strut torn out



## Damage not included in the rental price

Repairs / replacement carried out by PERI, costs will be billed



Dent in the profile > 5 mm deep



Bent formlining support > 3 mm



Crack in the welding seam



Levering corner deformed



Dent in Wall Thickness Compensation > 3 mm



Bent Angle



Bent accessories



Soiled accessory components  
■ Cleaning





## Damage not included in the rental price

Disposal (scrapping) by PERI, costs will be billed



Profile torn out



Kink in the longitudinal profile



Element bent across the diagonal  
> 6 mm



Element bent > 8 mm



## Zero Damage

### The PERI campaign supporting quality assurance

If PERI materials are returned from a construction site in poor condition, they must be cleaned, repaired or even scrapped in the event of a write-off. In the case of any mechanical damage or heavy soiling that has been caused by the user, labour and material costs will be charged separately. PERI has launched the Zero Damage Campaign to raise user awareness on the construction site regarding optimal handling of the materials.

#### The aim of the Zero Damage campaign is to:

- provide users with all necessary information with regard to proper handling and use of all PERI materials on the construction site
- help users reduce costs relating to material damage and soiling that could occur after the return delivery to PERI
- optimise communication channels between users and PERI



## Zero Damage Quality Assurance

#### Protecting the formlining

- In order to save costs and avoid soiling, only use PERI Clean as a release agent before each use.

#### Moving

- The system-related lifting device and hook prevent damage to corners and frames.

#### Striking

- In order to protect the panel formwork from damage and thus save costs, striking after the concrete has hardened is only carried out using suitable auxiliary means.

## Examples

### Correct and incorrect handling of PERI materials



**Correct**

Before shuttering, apply PERI Clean to the formlining



**Incorrect**

Working without PERI Clean



**Result**

Heavily-soiled formlining = costs



**Correct**

Only move the panel formwork using appropriate lifting gear and hooks



**Incorrect**

Do not lift the panel formwork unevenly or without hooks



**Result**

Damaged corners and frames



**Correct**

Carefully remove the formwork using suitable equipment



**Incorrect**

Striking the formwork with a tie rod or other objects



**Result**

Damaged frames



## Zero Damage

The PERI campaign supporting quality assurance

### Closing of couplers

- Unnecessary costs are avoided if the couplers are closed with a carpenter's hammer.

### Storage of panel formwork

- In order to avoid damage when storing the materials, ensure that the frame formwork is always stored with the formlining facing upwards and timber supports are used.

### Cleaning the frames prior to return delivery

- By cleaning the materials according to the instructions prior to the return delivery, no subsequent cleaning costs are incurred.

## Examples

### Correct and incorrect handling of PERI materials



#### Correct

Close the couplers with a carpenter's hammer



#### Incorrect

Closing the couplers with a sledgehammer



#### Result

Damaged couplers = costs incurred for repair work



#### Correct

Always store the formwork with the formlining facing upwards as well as using timber supports



#### Incorrect

Laying the formlining directly on the ground



#### Result

Damaged materials = costs incurred for the repair of damaged materials



#### Correct

Carefully clean the inside and outside of the frames before return delivery takes place



#### Incorrect

Returning soiled materials that have not been cleaned beforehand



#### Result

Costs incurred for cleaning



# Optimal preparation of return deliveries

Measures taken on the construction site

## 1. Pre-clean the materials



Regular cleaning increases the quality of concreting results. In addition, regular cleaning ensures that no additional costs are incurred after the materials have been returned to PERI.

**Important**  
**Only use suitable tools to clean PERI rental equipment in order to avoid damaging the system components.**

**Our tip**  
**Remove any concrete residue as soon as possible after dismantling.**

## 2. Register return deliveries



By registering a return delivery at the respective PERI branch, if necessary 3 working days before the scheduled date, you will facilitate problem-free return deliveries of rental materials. Freight commissioning takes place separately at the customer's own discretion or if commissioned by PERI directly.

**The following information is required when registering:**

- Consignment collection through PERI or arranged by the freight forwarder
- PERI customer number
- Name of the construction project and PERI order number
- Date of the planned pick-up or planned return delivery to PERI
- Type of materials and quantity

### 3. Pack according to PERI standards



#### Important

If special freight/construction site requirements have to be observed when commissioning a freight forwarder, please inform us regarding

- the necessity of a loading crane including details of the loading radius or loading width
- special construction site conditions such as a narrow access or similar

#### Our tip

Accurate data – especially regarding material quantities – makes it easier to calculate freight volumes. This optimises all return delivery processes.



The materials are bundled together to form loadable units, sorted and made ready for loading and transportation.

#### Important

If PERI is commissioned to collect the rental materials, the loading volume is calculated in accordance with our packaging guidelines. If the requested loading volume is exceeded through the use of non-compliant packaging, processes can be made more difficult and additional costs could be incurred.

#### Our tip

The PERI packaging guidelines contain detailed information on the packaging units of all PERI systems. These guidelines guarantee an optimised loading volume and correspondingly optimised transport costs.

## Optimal preparation of return deliveries

### Measures taken on the construction site

#### 4. Load truck and secure the load



Correct vehicle loading enhances overall safety, as well as ensuring smooth material return processes.

##### **Guidelines for vehicle loading**

- Only reliable lashing equipment should be used.
- Wire crates require a cover or foil protection. This will prevent loose small components from being lost.
- The weight of one packing unit may not exceed 2 t. Position timbers at least 8 cm high under all packaging units that are not packed in ring pallets or boxes. This is necessary as our employees unload the materials with forklift trucks.
- For some rental equipment, edge protectors should be used to prevent any damage to the edges. Detailed information can be found in the PERI packaging guideline (see "Comments" for the equipment concerned).

##### **If you commission PERI to carry out the transport, the following also applies:**

- The materials are to be packed in units ready to be collected.
- The units specified for each transport of PERI rental materials must be in accordance with the "PERI Packaging Guidelines" brochure.
- Loading time must not exceed 2 hours.

##### **Important**

When loading, both the shipper and the driver are responsible for ensuring correct load securing. Compliance with the applicable regulations is absolutely essential.



## 5. Materials unloaded in the PERI rental park



After the forwarder / driver has registered on arrival at the PERI rental park, PERI employees begin unloading operations using a dedicated unloading lane. A PERI employee unloads the materials with a forklift truck and places these in a designated incoming goods area.

Unloaded materials are then marked with:

- a booking reference number (internal number for a return delivery)
- PERI customer number
- the order number of the construction project
- the date of arrival in the PERI rental park

**The optimal System  
for every Project and  
every Requirement**



**Wall Formwork**



**Column Formwork**



**Slab Formwork**



**Climbing Systems**



**Bridge Formwork**



**Tunnel Formwork**



**Shoring Systems**



**Construction Scaffold**



**Facade Scaffold**



**Industrial Scaffold**



**Access**



**Protection Scaffold**



**Safety Systems**



**System-Independent  
Accessories**



**Services**



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