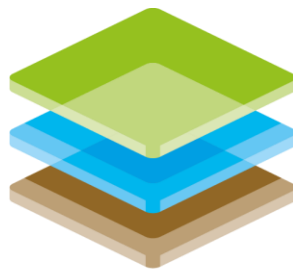


INSTRUCTIONS FOR USE

STEEL SITE ROAD



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safety: efficient and sustainable

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Instructions for use

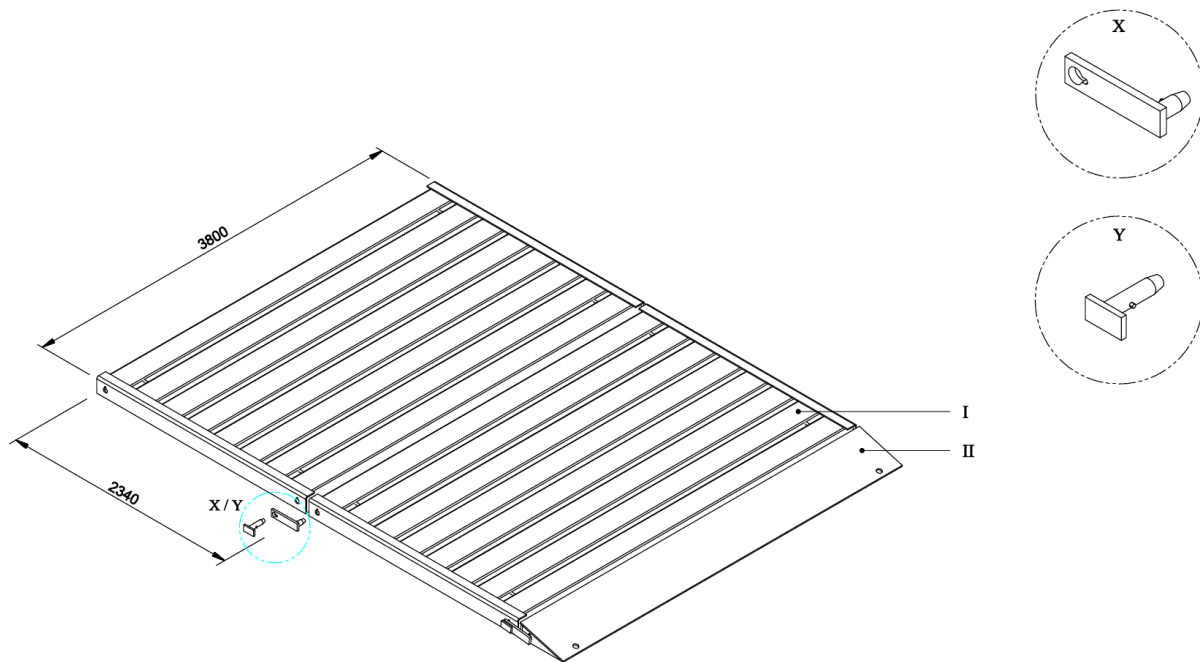
These instructions enable the safe and efficient use of the steel site road. The instructions are part of the system and shall be kept in close proximity of the construction site, accessible to the personnel at all times.

The personnel must read and understand these instructions thoroughly before starting to work. The prerequisite for safe work is observance of all safety precautions and work instructions specified in these instructions.

In addition, the local occupational health and safety regulations and general safety regulations for the area of application apply.

All safety-related dimensions conform with German safety and accident prevention regulations and German standards. The respective state-specific regulations are to be checked and applied before the work starts.

1. SYSTEM OVERVIEW



(Dimensions in mm)

I Steel site road element
II Access ramp

X Connector
Y Bolt

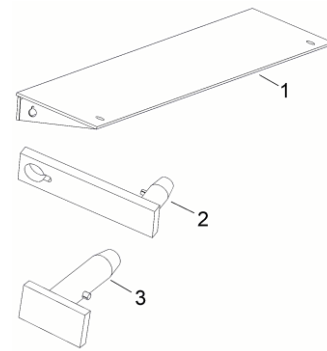
2. TECHNICAL PARAMETERS

Steel site road element

Art. no.	l [m]	b [m]	t _{pl} [m]	G [kg]	A [m ²]	Load
880 100	2.34	3.80	0.16	869	8.90	12 t axle load

Accessories

No.	Art. no.	Designation	G [kg]
1	880 200	Access ramp L=0.48 m, W=3.80 m	334.0
2	880 150	Connector	4.8
3	880 152	Bolt for steel site road	3.4
4	880 210	S-hook for steel site road	2.7



l Length
b Width
t_{pl} Panel thickness

G Weight
A Surface

3. OCCUPATIONAL SAFETY AND GENERAL INFORMATION

3.1. Symbols in these instructions

Safety information

The following occupational safety symbols are on all occupational safety information which indicates a danger to life and limb of personnel and are identified by a pictogram, a signal word and a signal colour.

You can find explanations of the dangerous situations at the relevant points in the documentation. Observe this information at all times!

Observe the applicable local safety and accident prevention regulations at all times!

All the following dimensions conform with German safety regulations.

DANGER



Type and source of danger

This symbol warns of an immediate danger to the life and health of personnel. Failure to observe these warnings results in serious repercussions for health, culminating in life-threatening injuries and extensive property damage.
Action which must be refrained from so that the danger does not occur.

WARNING



Type and source of danger

This symbol warns of an imminent danger to the life and health of personnel, and of environmental and property damage. Failure to observe these warnings may result in serious repercussions for health, culminating in life-threatening injuries and/or extensive environmental and property damage.
Action which must be refrained from so that the danger does not occur.

CAUTION



Type and source of danger

This symbol warns of an imminent danger to the health of personnel and of environmental and property damage. Failure to observe these warnings may result in moderate or slight repercussions for health, culminating in injuries and/or extensive environmental and property damage.
Action which must be refrained from so that the danger does not occur.

HINT



Type and source of the machine or plant damage

This symbol warns of a dangerous situation and serves to mark a note on how to handle the steel site road. Failure to follow these instructions can lead to extensive property damage.
Action that must be omitted in order to prevent damage from occurring.

Tips and recommendations



This symbol highlights useful tips and recommendations, as well as information for efficient and fault-free operation. Action which must be refrained from so that the danger does not occur.

Other markings

The following markings are used to highlight instructions, results, lists, references and other elements in these instructions:

Marking	Explanation
1., 2., 3. ...	Step-by-step instructions
	Results of action steps
	Listings without a fixed order

3.2. Dangers

When working with the steel site road, during loading and unloading, and when laying the panels, the following dangers with the potential to cause serious injuries or death arise, among others:

- Injuries due to suspended/swivelling loads
- Stumbling, slipping, falling
- Being hit by falling parts
- Crushing of hands and feet during loading and unloading, transport, assembly and disassembly and when laying out the panels

3.3. General safety information and measures for reduction of risks

Please note that an appropriate risk assessment must be generated for the specified work step before assembly and disassembly of the panels.

Compliance with the technical specifications and safety information in these use instructions is required at all times.

DANGER



Risk of death or injury owing to insufficient safety measures on the construction site and for adjacent installations / trades!

Insufficient safety measures on the construction site result in a risk of death or injury!

- Damage to buildings, vehicles, objects and persons located in the work area must be prevented by appropriate measures (e.g. sufficient safety distances).
- The panels are **not** suitable for bridging trenches, large differences in height or large holes.
- The use instructions must be available at the construction site.
- The construction road must be laid out by qualified personnel.
- The stability of the transport and laying machines must be ensured.
- The accessories, in particular the load carrying and/or slinging equipment, as well as the corresponding attachment points must be checked for damage and defects before work is started. Work may only begin when all defects have been eliminated.
- If the panels are laid by means of a forklift truck, the conditions on site must be checked in particular; especially a stable, level surface must be ensured.
- Ensure traffic safety if panels are laid in the area of public road traffic or if the laying has an impact on road traffic. Consult with the competent authorities.
- Two persons are always required to lay the panels.

3.4. Protection against falls and falling parts

DANGER



Risk of death or injury owing to falls or falling parts!

Falls or falling parts result in a risk of death or injury! The following measures must be implemented, depending on the construction site.

- Sufficient protection of the working area.
- The panels are to be fastened with an approved and tested 4-strand chain hanger. Make sure that the hook safety catch is intact. The length of the chain hanger should be selected so that the bracket is in the permitted area (between 45° and 60°).
- When laying the panels with a forklift, you need an additional load suspension device (crossbeam or similar) which is to be secured to the forklift. The chain hanger is to be attached to the load hook of the load handling attachment.
- The panels should be kept as close to the ground as possible.
- Before the disassembly of the panels, the top side must be cleaned properly.
- When disassembling the panels, materials adhering to the underside may come loose and fall off during the lifting and swivelling process. For safety reasons, the bottom of the panels must therefore also be cleaned before relocation/loading.
- When laying the steel site road, the minimum distances (protective areas) around the upper edge of the pit or trench must be observed.
- Falling down of the panels during the lifting process must be prevented by properly inserting the slings.
- Care must be taken to ensure that the panels are free of falling materials (tools, screws, connectors, etc.) during lifting and swivelling.
- Do not step under suspended loads.

3.5. Storage, transportation and lifting operations

Storage

DANGER



Risk of death or injury owing to incorrect storage!

Incorrect storage results in a risk of death or injury, as well as a risk of property damage!

- The panels may only be stored on firm and level ground.
- The prescribed safety distances to pit and trench walls must be strictly observed during storage.
- The load-bearing capacity of the underground must be ensured before storage.
- The panels may only be stacked neatly in a maximum of 8 stacks of 5 panels each after having been cleaned. Between the stacks of 5 panels, 3 squared timbers (10 cm x 10 cm) must be placed underneath each of them at intervals of one third.

Transportation and lifting operations

DANGER



Risk of death or injury owing to suspended loads!

Loads may swing out and fall during lifting operations. There is a risk of death or injury, as well as a risk of property damage!

- Cranes or hydraulic excavators should preferably be used for transport/laying in hoist mode; when transporting with forklift trucks, it must be taken into account that the ground in the construction site area is often uneven. This can lead to the load slipping or falling - additional safety measures may be necessary when transporting with forklift trucks.

- The panels must be cleaned before transport.
- Transport damage must be reported to the manufacturer immediately.
- When laying the panels with a forklift, you need an additional load suspension device (crossbeam or similar) which is to be secured to the forklift.
- Hydraulic excavators in hoist operation must be equipped with an overload warning device and line breakage protection; the overload warning device must be switched on in hoist operation.
- Lifting gear, load handling devices and slings must be selected according to the load.
- All lifting gear, load stops and load handling devices must be approved and tested.
- Only load hooks with a safety latch must be used to prevent the load from unintentionally unhooking when lifting, pulling or transporting.
- The panels may only be attached and transported at the designated attachment points.
- Pendulum movements during transport must be reduced to a minimum.
- Transport must be carried out as close to the ground as possible.
- Never pass the lifted load over persons.
- Attached loads are to be guided with guide ropes/guiding rods; always walk behind the load and do not walk backwards.
- Accompanying persons for guiding the load and lifting gear must always be inside of the machine operator's field of vision and outside of the travel path or danger zone.
- Accompanying persons for guiding the load and lifting gear must have a safe standing position; never stand between a suspended load and a fixed abutment (danger of crushing!).
- Always ensure that fingers and feet are free when lifting, guiding and setting down the load; never guide loads by the sling gear.
- Unauthorized persons must be prevented from entering the working and swivel area (danger zone). If necessary, the transport and loading area must be shut-off or secured by a security guard.

3.6. Criteria for the inspection, repair and withdrawal of worn or damaged components

- The panels are subject to a functional test and visual inspection by the supervisor prior to each use. Attention must be paid to conspicuous defects such as fractures, defective attachment points and gross damage.
- If defects are found that might reduce the load-bearing capacity, especially damaged attachment points, the panels may only be reused after they have been properly repaired.
- Defective or missing parts must be exchanged, repaired or replaced before use.
- Only original parts from the manufacturer are to be used.
- The manufacturer does not grant any warranty for any repairs carried out independently and when using parts that are not original parts.
- In case of any doubts about the usability of the panels, in case of defects and damages, the manufacturer is to be contacted.

3.7. Applicable regulations

The applicable national rules and regulations must be observed and complied with.

3.8. Personal protective equipment (PPE)

Personal protective equipment (PPE) is designed to protect people from adverse effects on safety and health at work.

Basically, the personal protective equipment required for the activities is the result of your risk assessment.

We recommend the following PPE for loading and unloading activities, assembly and disassembly, transport and lifting activities, maintenance and repair and cleaning.

4. ASSEMBLY INSTRUCTION

Before starting the work, it is obligatory to observe all safety precautions from section "Occupational health and safety and general information" (see section 3 Occupational health and safety and general information)!

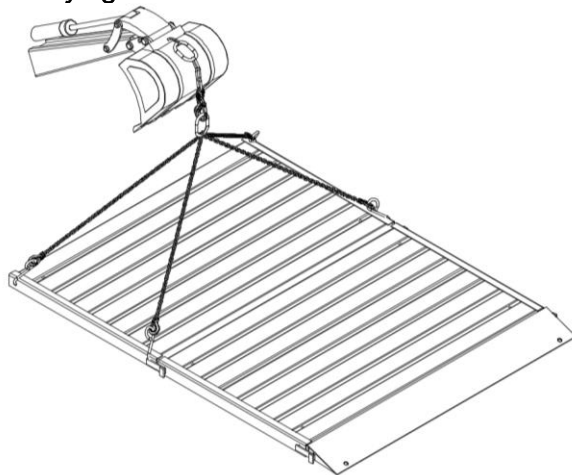
The steel site road elements can be unloaded either as a package or individually. 4-S hooks are supplied for package handling and to facilitate better handling on the construction site. A maximum of 6 elements may be lifted at the same time using these approved hooks.

Unloading and laying must be carried out using suitable lifting equipment. Adequately sized wheel or track excavators are to be provided on site. You should always use all 4 eyelets to lift and transport the panels. Panels should be transported in a horizontal position.

1. Preperation

- Determine direction of installation using direction-finding poles or plumb lines
- If necessary, lay out geotextiles

2. Laying



Laying is carried out using suitable lifting gear and slings (min. 13 mm 4-strand chain with GS approval).

The chain sling to be provided by the customer is to be secured to the four suspension bolts on the top of the panel.

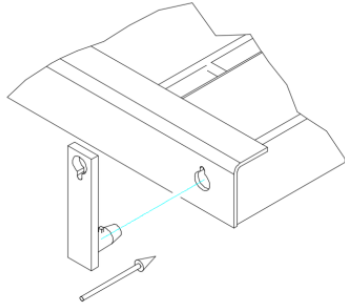
3. Positioning

Two panels are to be laid out one after the other with the short sides in the direction of travel and connected to each other and then lined up. Further laying is then carried out with continuous alternation between laying and connecting.

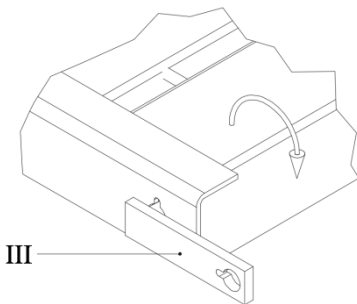
Access ramps must be coupled with connectors at the starting and final point of the site road in order to avoid damage.

4. Connecting

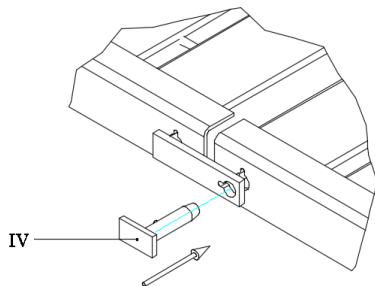
The panels are connected to each other using connectors and locking bolts.



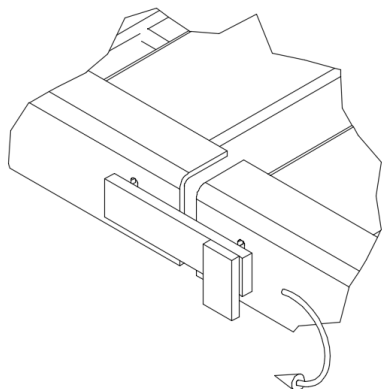
Insert connector vertically into the element already placed.



Turn connector 90°.



Line up the next element using lifting equipment and locking bolts through the opening of the connector, then insert into the steel site road element. Only then the element can finally be put down

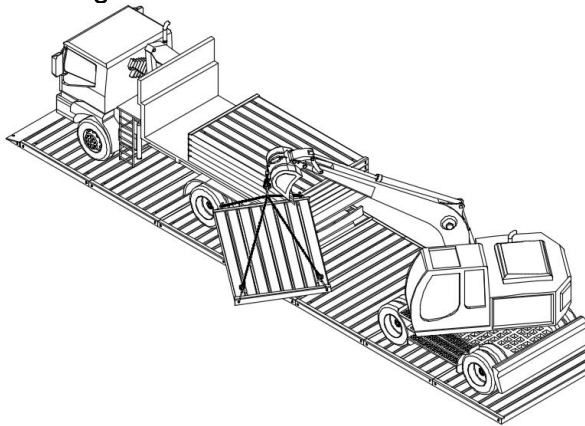


To secure the locking bolts, turn them 180°. The long end of the locking bolt must be vertical and facing down-wards.

5. Laying out in the curve

To create a curve, the panels in the outer bend should be locked in place with two connecting pieces and a locking bolt. This will result in a curve radius of approx. 40 m.

6. Driving



The steel site road can continue to be placed and can be used by vehicles after it has been secured.

5. DISMANTLING AND CLEANING

For dismantling and separating the panel elements, the panels may only be lifted from the hoisting points on the top end which have been provided for this purpose (round bolts, upper edge of the panel).

Digging the panels out with an excavator bucket will result in damage and should be avoided.

Residual earth is to be cleaned from the bottom of the panels by striking them on the ground (in the 4-strand chain hanger) multiple times. We recommend using geotextiles to keep the dirt on the panels to a minimum. Residual dirt in the lane recesses on the upper side of the panels is to be removed in a similar way in the 2-strand chain hanger.

Dirty panels weigh more and may result in higher return transport costs. This should be taken into account during the loading process.

The transport of uncleaned panels is prohibited.

Statutory provisions for standing beneath suspended loads and accident prevention regulations shall apply.

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