Transport Plate Set 8 80x40 St M10
Transport Plate Set 8 80x80 St M10
User guide

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Symbols, safety

Important, safety information, recommendation

Important information

CE conformity marking

Observe directions for disposal

General safety information

The details and information in this user guide are provided solely for the purpose of describing the product and its assembly. This information does not discharge users from the obligation to conduct their own assessments and checks. It is also important to bear in mind that our products are subject to a natural process of wear and ageing.

These notes contain important information that will enable you to use the product safely and appropriately. When sold, rented out or otherwise passed on to another party, this product must be handed over with the user guide.

When installing, using and maintaining Transport Plate Set 8 80x40 St, M10 (0.0.698.18) and Transport Plate Set 8 80x80 St, M10 (0.0.698.19) – both of which are referred to as the Transport Plate in this document – it is important to ensure all moving elements of the overall construction are secured to prevent unwanted, unintentional movement. Moving parts that could be live can cause serious injury!

You must therefore read and follow the safety instructions set out below.

- All work on and with the Transport Plate must be performed with “safety first” in mind.
- All work on and with the Transport Plate must be carried out wearing safety footwear.
- Take care when inside the swivel range or working area of the moving overall construction if it is in motion or in use.

- Observe the regulations pertaining to accident prevention and environmental protection that apply in the country and place of work where the product is being used.
- Use only item products that are in perfect working order.
- Check the product for obvious defects.
- Use the Transport Plate only within the performance range described in the technical data.
- Ensure all the safety equipment associated with the product is present, properly installed and in full working order.
- Do not alter the position of safety equipment, circumvent it or render it ineffective.

The Transport Plate described here corresponds to the state of the art and takes into account the general principles of safety applicable at the time this user guide was published. Nevertheless, failure to observe the safety instructions and warning notices in this user guide may result in personal injury and damage to property. We will assume no liability for any damage or injury resulting from such a scenario.

We reserve the right to make changes that represent technical advances.

Keep this guide in a place where it can be easily accessed by all users. Observe the directions contained in the overarching user guide for a system. The general safety information applies to the entire lifecycle of the Transport Plate.

1. During transportation

Observe the handling instructions on the packaging. Until it is assembled, the product must be stored in its original packaging, protected from moisture and damage. Large volumes of Transport Plates are transported in corresponding containers that weigh accordingly. Suspended loads can fall during transport if load-lifting attachments are inadequately dimensioned or incorrectly secured, thus potentially leading to serious injuries, including fatal injuries. Keep clear of suspended loads and use lifting gear with sufficient load-bearing capacity (see delivery paperwork for product weight). Carefully secure lifting gear and attach it only at sufficiently stable points.

2. During operation

Ensure that only persons who have been authorised by the user have access to the immediate swivel range or operating area of the system. This also applies when the system is not in active use. It must not be possible to actuate moving parts unintentionally. The Transport Plate is not designed for frames used to carry people.

3. During cleaning

Do not use aggressive cleaning substances. Do not use a high-pressure cleaner for cleaning.

4. During maintenance and servicing work

Carry out the prescribed maintenance work at the intervals stipulated in the user guide. Ensure that no fixings, connections or components can become detached or are loose. Secure moving parts during maintenance.

5. During disposal

Dispose of the product in accordance with the national and international regulations that apply in your country.

Correct use

The Transport Plate must only be used in accordance with the technical data and safety requirements set out in this documentation. The Transport Plate is a technical load-lifting attachment used to establish a connection with a load and is not a component part of any lifting gear. The Transport Plate is fitted between the load and the lifting device or is part of the load, but is marketed separately. The Transport Plate is not intended for private use.

Significant modifications to the Transport Plate shall result in an exclusion of liability on the part of item Industrietechnik GmbH and must be given due consideration in additional documentation.

The basic safety provisions of the following rules and regulations must be followed.

- Machinery Directive 2006/42/EC
- DIN EN 13155: 2017-11 — Non-fixed load lifting attachments
- DIN EN ISO 12100:2011-03 — Safety of machinery
General principles for design – Risk assessment and risk reduction (ISO 12100:2010)
- DGUV 209-13: 2012 — Safety instruction letter for slingers/signallers

- DGUV 209-021:2018 — Load tables for lifting gear comprising round steel chains, wire ropes, round slings, synthetic fibre lifting straps, synthetic fibre cables, natural fibre cables
- DGUV 100-500:2018 — Using load-lifting devices in lifting gear applications

The transport plate set was designed and evaluated based on the general requirements and tests of the DIN EN 13155: 2017-11. Internal company requirements and the regulations that apply in the country where the product is being used must be observed. You must not make any design modifications to, or carry out any machining work on, the Transport Plate yourself. We will assume no liability for any damage or injury resulting from such a scenario.

You may only use and maintain the Transport Plate if:

- The Transport Plate has been integrated properly and safely into the working environment,
- The user is responsible for ensuring proper and safe operation,
- You have carefully read and understood the guide,
- You are appropriately qualified – lifting eyes or attachment points must be used only by appointed and trained individuals in line with the specifications in DGUV 500-100,
- You are mentally and physically capable of doing so,
- You are authorised to do so by your company,
- You are using only original equipment from the manufacturer.

In line with DIN EN 13155:2017-11 “Non-fixed load lifting attachments”, the Transport Plate is approved for a maximum of 20000 load changes. When this limit is reached, the maximum expected service life of the Transport Plate is deemed to have been reached. The load-lifting attachment must be replaced.

Unsafe or inappropriate use of the Transport Plate runs a risk of serious injury caused by falling loads, crushing and cuts.

Improper use

Improper use is defined as any use of the product for purposes other than those authorised in the user guide and under the definition of correct use. We will assume no liability for any resulting damage or injury.

If the Transport Plate is being used as a permanent, static fixing for a suspension device, the user is responsible for designing the application and ensuring compliance with the performance limits of the Transport Plate. A maintenance and inspection plan that has been drawn up independently and as appropriate to the environmental conditions and conditions of use must be followed.

The Transport Plate must not be used as:

- A component in a pendulum application
- An auxiliary component for turning or moving machinery and plant

Safety notices

Ensure no crushing, entrapment, cutting or impact points can arise for handling operations when attaching or removing lifting gear.

Ensure lifting gear cannot be damaged by sharp-edged loads.

Follow the supplied guide when installing lifting eyes or attachment points.

Check on a regular basis and before each use to ensure attachment points are screwed securely in place (tightening torque) and are free from corrosion, wear, incipient cracks, deformation, etc.

Impact loads, twisting and vibration can cause unintentional loosening. Fixation options: Thread-locking fluid such as Loctite or Weiconlock (follow manufacturer directions)

Due to unpredictable swinging, the area around the load is considered a safety zone. This safety zone must be kept clear to prevent damage to material and buildings and avoid personal injury. The frame must be moved at a low speed to minimise the hazard potential and its speed of movement must be adapted to the prevailing circumstances.

Under no circumstances should there be any people underneath the lifted load or in the designated safety zone.

Personnel qualifications

Assembly, commissioning, operation, disassembly and maintenance work (including servicing and care) require an adequate knowledge of mechanical engineering and an understanding of the relevant technical terminology. To ensure operational safety, these activities must therefore be carried out only by a qualified person or by trained personnel under the direction of a qualified person.

A qualified person, slinger or signaller is an individual who – by virtue of their specialist training, know-how, experience and knowledge of pertinent provisions – is able to assess the work that is assigned to them, identify potential hazards and put in place appropriate safety measures. A qualified person must comply with the applicable specialist regulations.

CE declaration

EG Declaration of Conformity

item

EC Declaration of Conformity pursuant to EC Machinery Directive 2006/42/EC, Annex II A

We hereby declare that the transport plate:

Transport Plate Set 8 80x40 St M10	0.0.698.18
Transport Plate Set 8 80x80 St M10	0.0.698.19

Product description:
Technical lifting accessory and a component not attached to the lifting machinery, allowing the load to be held. The transport plate is placed between the load and the lifting device or is part of the load and is independently placed on the market. The transport plate is not intended for private use.

Satisfies the following pertinent regulations:
Machinery Directive (2006/42/EC)

Essential requirements that have been applied, the references of which have been published in the Official Journal of the European Union:

DIN EN 13155:2017-11	Non-fixed load lifting attachments
DIN EN ISO 12100:2011-03	Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)

The following technical specifications were taken into account:

DGUV 209-021	Belastungstabellen für Anschlagmittel aus Rundstahlketten, Stahldrahtseilen, Rundschlingen, Chemiefaserhebebändern, Chemiefaserseilen, Naturfaserseilen
DGUV 100-500	Betreiben von Lastaufnahmeeinrichtungen im Hebezeugbetrieb

Authorised representative for compiling the relevant technical documentation:

Solingen, 18.02.2020 Documentation Signatory

EC-Declaration of Conformity was issued:

Solingen, 18.02.2020 Managing Director Signatory

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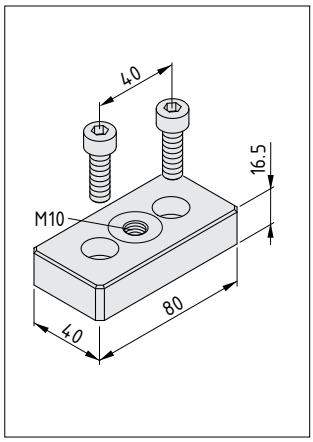
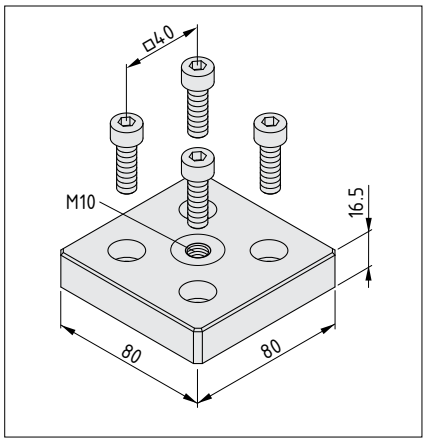
Product description, use and accessories

The Transport Plate is a load-lifting component that functions as a particularly ergonomic and stable means of connecting frames to a lifting device.





Operating data

Material of Transport Plate:	1.0037 (St 37)
Tightening torque of the M8, 10.9 screws:	25 Nm with 6 A/F
Operating temperature:	-20°C to +70°C

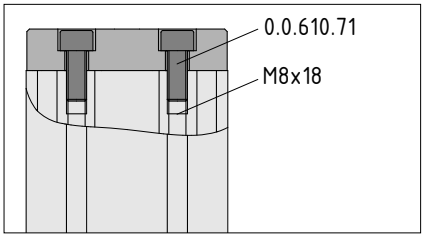
The Transport Plate is intended as a load-lifting attachment in an area that is protected from the weather.

- Do not install or use in close proximity to industrial plant that produce chemical emissions.
- Resistant to many of the substances usually encountered in the production area, such as water, mineral oil, grease and detergents. In case of doubt regarding resistance to certain chemicals such as test oil, alloyed oils, aggressive cleaning substances, solvents or brake fluid, we advise that you consult your specialist representative from item GmbH.
- Avoid long periods of contact with highly acidic or alkaline substances.
- Avoid using in very salty air.
- Avoid using in areas where there is nuclear radiation.

We recommend consulting item GmbH before using this product in critical areas.

Commissioning and operation

Before installing the Transport Plate, tap threads into the core bores at the end face of the aluminium profiles. All Profiles 80x80 and Profiles 80x40 from Line 8 and Line X 8 with their various groove geometries can be used for this purpose. Ensure the tapped threads have a usable depth of at least 16 mm. Clean the tapped threads.



Next, use the enclosed screws to fix the Transport Plate in place. Use a tightening torque of 25 Nm, checking it with a torque spanner.

- Before installing the Transport Plate, check it for visible damage.
- The Transport Plate must be fastened only to the core bores of item Profiles 8 80x80 (0.0.026.27) and 8 80x40 (0.0.026.04) using the enclosed DIN 912 M8x25 10.9 screws.
- Please note that an eccentric fixing will increase load (torque is generated because the point where traction takes effect and the fixing are not on one level, see Table 1).
- Install the Transport Plate so that the tensile load is transmitted ideally parallel to the lifting direction. Where operating conditions mean it is not possible to ensure parallel load transmission, the maximum suspended load that has been calculated must be reduced accordingly (see Table 1).

- Following installation, carry out a test lift outside the area where the product will be used or somewhere that is free from hazards.

Determining the maximum load

Design the orientation of attachment points to avoid prohibited stresses caused by the load twisting or turning over, for example.

- Single-line attachment: Positioned perpendicular over the centre of gravity on the load
- Double-line attachment: One on each side and above the centre of gravity on the load
- Three and four-line attachment: Arranged evenly on the same level around the centre of gravity on the load

Calculate the necessary load-carrying capacity of the individual attachment points for symmetrical and/or asymmetrical loading as per the following formula.

$G = W_{LL} \cdot (n \cdot \cos\beta)$

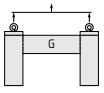
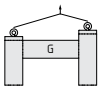
where:

W_{LL}: (Working Load Limit) maximum load-carrying capacity of a Transport Plate at an attachment point = 400 kg

G: Maximum load that can be transported (kg)

n: Number of load-bearing lines

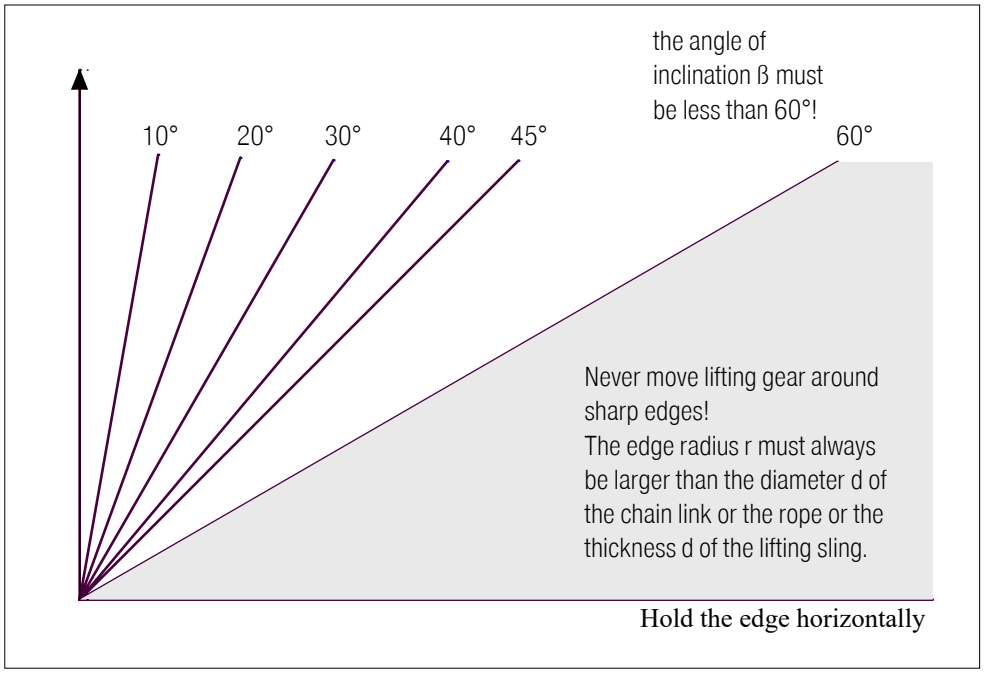
ß: Angle of inclination on the single line

	Symmetry		Symmetry	Asymmetry	Asymmetry
					
Double line	n = 2			n = 1	
Three/four line			n = 3		n = 1

Attachment type									
Number of lines n	1	1	2	2	2	2	3 or 4	3 or 4	3 or 4
Angle of inclination ß	0°	0°	0°	0°- 45°	45°- 60°	asym.	0°- 45°	45°- 60°	asym.
Factor: n·cos ß	1	1	2	1,4	1	1	2,1	1,5	1
$G = W_{LL} \cdot (n \cdot \cos ß)$ item - Transport Plate	Not possible*	400kg	800kg	560kg	400kg	400kg	840kg	600kg	400kg

* It is not permitted to install the Transport Plate on the side of the aluminium profile, in the grooves.

Protractor for angle of inclination



Based on DGUV information document 209-021:2015, the maximum angle ß of the attachment lines must not exceed 60° and must not run around any sharp-edged corners.

Maintenance and inspection

The Transport Plate is fundamentally a maintenance-free part.

All products are subject to a natural process of wear and tear that varies according to the relevant conditions of use.

The connection points between the Transport Plate and construction consist of different materials with different material properties. Due to the operating conditions, we recommend they are regularly checked and visually inspected for damage and wear.

In line with DIN EN 13155:2017-11 “Non-fixed load lifting attachments”, the Transport Plate is approved for a maximum of 20000 load changes. When this limit is reached, the maximum expected service life of the Transport Plate is deemed to have been reached. The load-handling attachment must be replaced.

Functionality should be checked after the first 24 hours in operation. After that, it is advisable to carry out maintenance on a quarterly basis. As the manufacturer is unaware of the environmental conditions and conditions of use, the user is required to use their own judgement.

The following issues should be checked during every service and before/during every use:

- Check tightening torques (25 Nm per bolt)
- Visible damage
- Wear and tear
- Deformation on the frame/Transport Plate
- Smooth installation and secure fixing of the Transport Plate

If any damage is identified, the part in question must be replaced immediately.

Post-installation and maintenance checklist
TS No./SC No./inventory No.:
Signature:

Inspection criteria	Comments	OK	Not OK
General construction			
Deformations			
Wear and tear			
Cracks			
Loose components			
Sharp edges			
Tightening torques – fixings			
Stability			
Max. loading values			
Internal company specifications			
Crushing and/or cutting points			
Swivel range of the construction clear			
Labelling			
Documentation			

Maintenance carried out: Company:
Name:
Date / signature:

Disposal

The materials used are environmentally friendly.

The product can be recycled or re-used (if necessary after refurbishment and the replacement of parts). The use of appropriate materials and easy dismantling ensure the product can be recycled.

Careless disposal of the Transport Plate can pollute the environment.

Dispose of the Transport Plate in accordance with the national regulations that apply in your country.

item

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