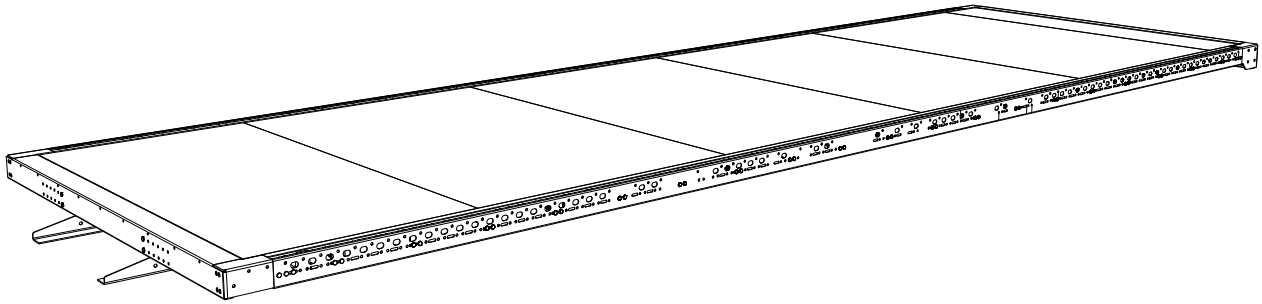
Mounting instruction
steel platform



Contents

GENERAL REMARKS

Introduction to Mounting Instruction

Alteration service: Yes
Staff: According to curriculum for apprenticeship as a body and vehicle mechanic and a body and vehicle construction mechanic.

This Mounting Instruction is part of the delivery and an important help for successful mounting. Therefore, it must be available to the mechanic during the mounting works.

Furthermore, the assambly guidelines oft he applicable vehicle producers must be obeyed.

Copyright:

If you need any further information, do not hesitate to contact us:

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Germany
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Email: verkauf@tse-trailersystems.de
Homepage: www.tse-trailersystems.de

Instruction and training support

As an employer, you are obliged to inform and instruct your personnel about existing legal and accident prevention regulations.

The personnel must have understood these instructions, and it must be safeguarded that the instructions are obeyed.

Only in this way you will reach safety and danger awareness of your personnel at work.

Example for training topics

1. About Safety

- Accident prevention regulations
- General legislation
- General safety hints
- Measures in emergency cases
- Personal protective equipment

2. Maintenance and repair regulations

- Correct use of cleaning agents and lubricants
- Special experience of the mechanic in maintenance, repair, cleaning and upkeep of the product

Hints

Attention:
The surfaces of the TSE modules must not be contaminated with caustic cleaning fluids. Cleaning fluids with the appropriate labeling are aggressive and can cause damage to all component surfaces. These should expressly not be used for gentle cleaning.

Nummer	Symbol
GHS05	corrosivity

ATTENTION!
Texts with this symbol will warn you against possible mistakes in mounting and, therefore, against potential material damages.

HINT!
Texts with this symbol will give you tips or additional information.

TIGHTENING TORQUE!
Texts with this symbol will give you necessary tightening torques.

You need holes!
Texts with this symbol indicate the setting of holes.

Safety

General

Although our products are in accordance with the state of the art, they may pose a risk if:

- they are mounted by unskilled personnel
- they are maintained improperly

Safety hints

This safety instruction informs you about the products of TSE Trailer System Engineering GmbH & Co. KG. It contains information about maintenance and repair of the parts and their components. The service instruction has only been written for skilled personnel of qualified and authorized specialized companies in motor vehicle crafts. The service instruction is not applicable for other target groups.
We want to support specialized companies with the present mounting instruction during the mounting works with our products.

TSE Trailer System Engineering GmbH & Co. KG accepts no liability for the installation of inapplicable or unreleased parts in their products.

Defects due to wrong handling, aggressive cleaning agents, use of force or subsequent changes of the delivered product or single components of it, as well as non-observance of the safety hints and consequential damages caused thereby, are not covered by our warranty.

Only use unchanged original parts and accessories supplied by the manufacturer.

We do not accept any warranty for the correctness, completeness or currency of the given information.
The contents and information of this mounting instruction are neither a warranty or warranted characteristics within the meaning of German legislation, respectively the German Civil Code (Bürgerliches Gesetzbuch (BGB)), nor can they be interpreted as such.

No claims can be derived from provision of information, recommendation or consulting. Liability for damages is generally excluded as far as we are not responsible in the sense of intent or gross negligence, or as far as this does not contradict mandatory legal provisions.

Texts and graphics are subject to our rights of use; copy rights or right of distribution in any form require our agreement.

Mentioned brand names, even if they are not marked as such in every case, are still subject to the regulations of the trade mark law.
If any disputes of legal nature occur from applying information found in this mounting instruction, they shall solely be subject to the regulations of German law.

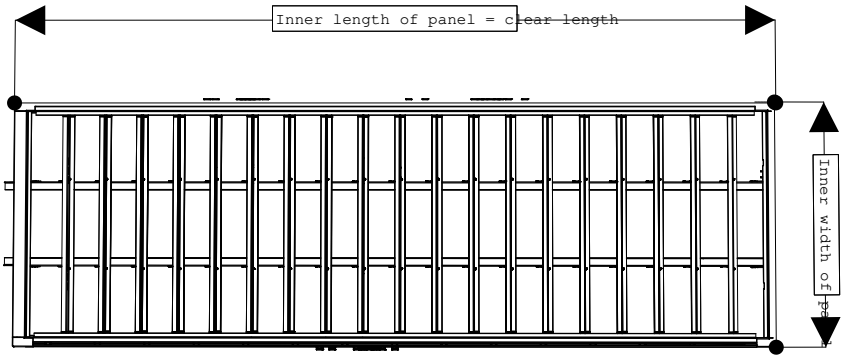
The Amtsgericht Stuttgart (Local Court in Stuttgart) is deemed to be agreed on as place of jurisdiction.
If some clauses of this declaration about limitation of liability do not or no longer comply with the applicable legal provisions, the validity of the other clauses shall remain unaffected thereof.
Read the information in this mounting instruction carefully. Especially, obey the hints for your own safety.

All technical information, descriptions and pictures shall be valid from the day of their printing - respectively the day of any supplements hereto - on.
We reserve the right to make changes due to steady further development.
No claims can be derived from applications and explanations of this publication.

Safety hints for the technician:
Unauthorized people are not allowed to enter the vehicle and the area around it.
Your working area should be in good order.
Only works which you are commissioned and acquainted with have to be executed.
Increased caution is advisable in dangerous areas.
Obey the producer´s information and safety hints for the applicable product when you deal with operation materials (oils, grease etc.).
Only applicable lifting devices may be used.

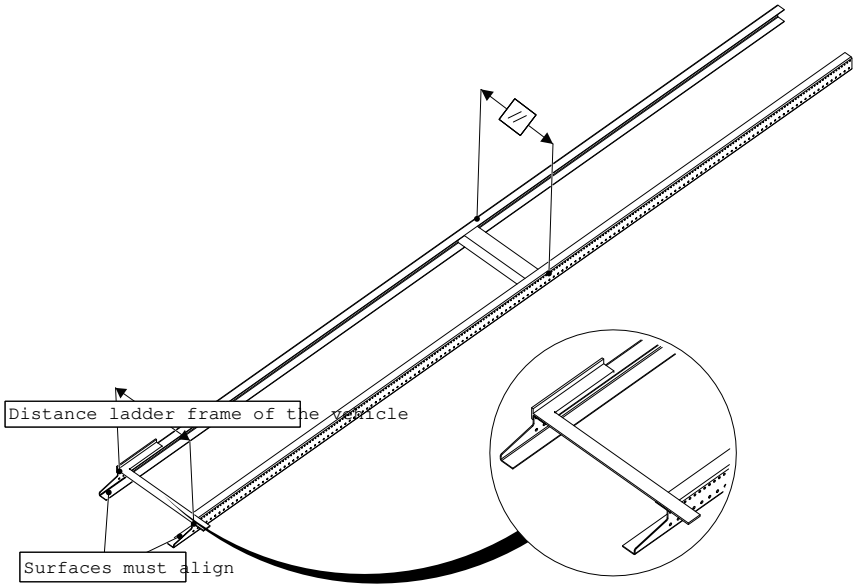
Definition inner length of panel or clear length

1



Alignment of auxiliary longitudinal beams

1

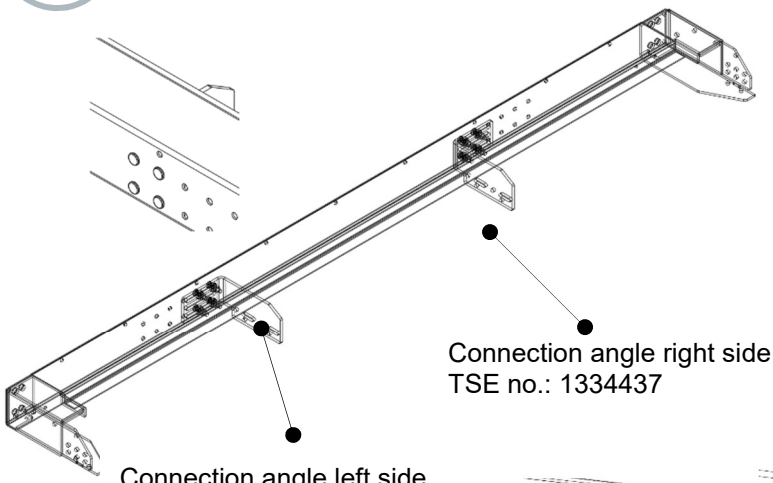


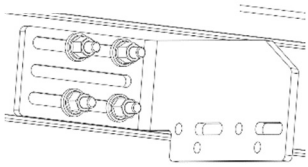
The distance, the right angle and the parallelism must be determined.
Then fix to avoid shifting.

Determination of length of the cross beam see attached drawing.

Mounting of front cross beam frontside

1 Mount the connection angle to front cross beam





Attention: The distance between cab and head frame must be determined before installation and must be taken into account.

The dimensions for distance determination can be seen on the drawing (page 10).

Knurled bolt M10x42

Washer D10.5

Hexagon flange with countersink M10

Tightening torque 60 Nm

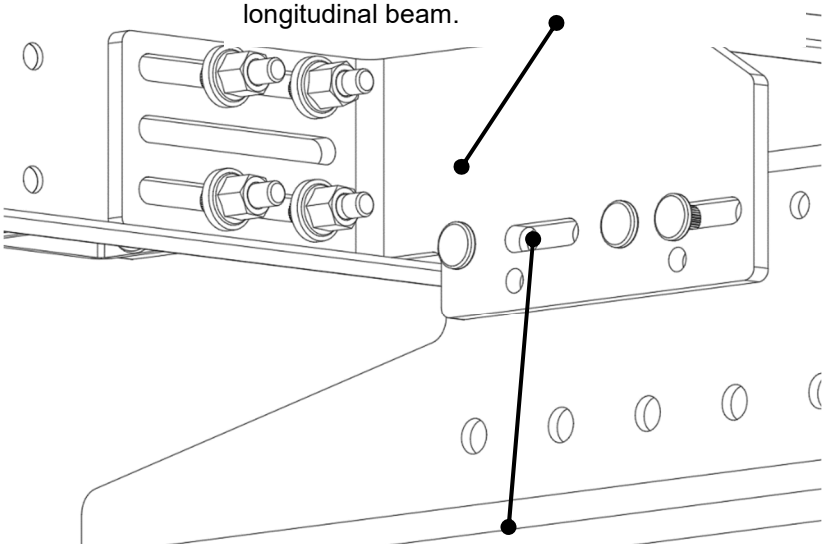
Mount the front cross beam frontside.
Do not tighten the knurled bolt at this point of time yet.

Knurled bolt, Washers, and hexagon flange clamping plates have to be taken from the **accessories ront cross beam frontside TSE no. 1375460**

.

2 Mount the connection angles at the auxiliary dinal beams.

Concerning VEC frames, use first drill hole of the fixing bracket for the supporting longitudinal beam.



Concerting cranked VEC frames, the position oft he front cross beam must be adjusted via the oblong holes.

Knurled bolt M10x42

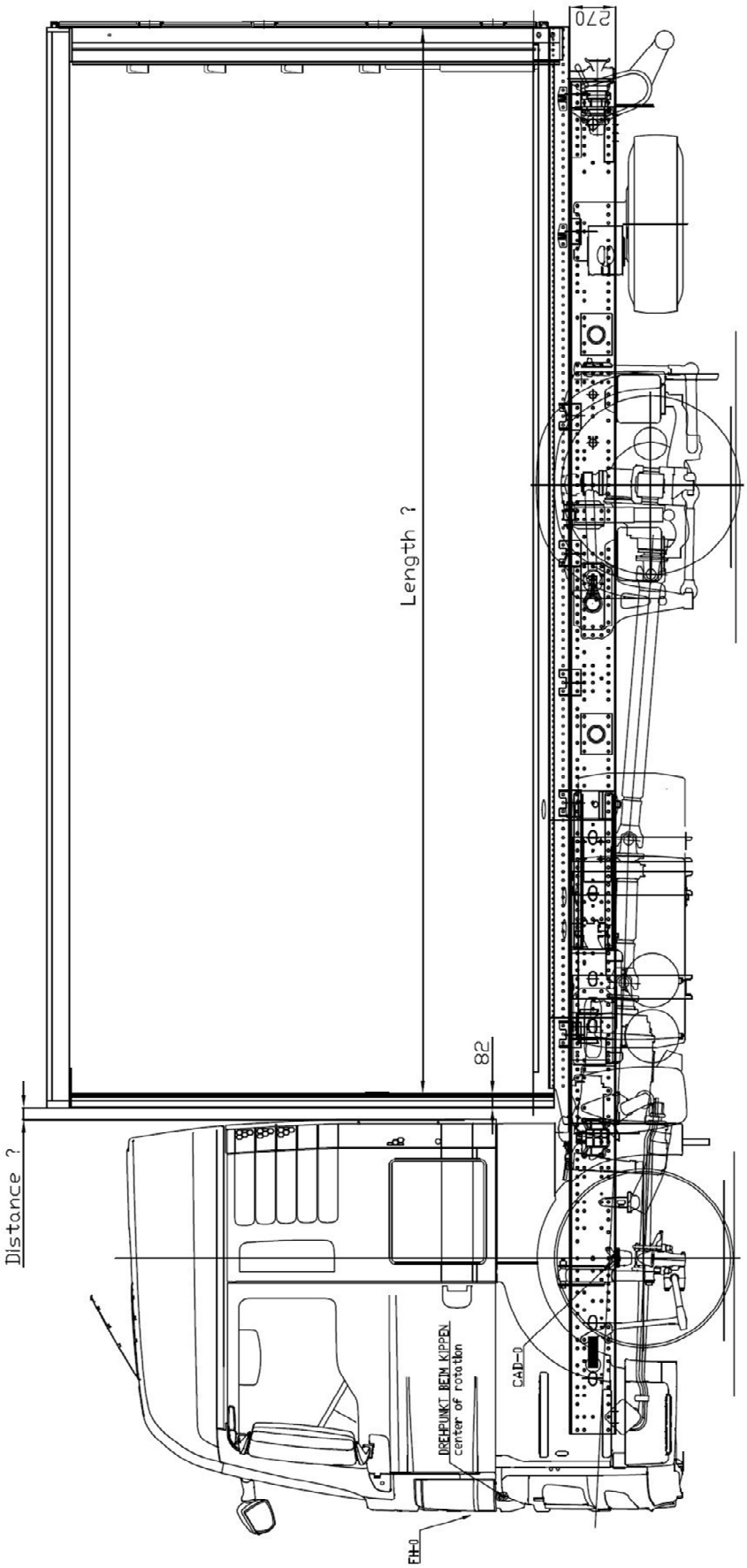
Hexagon flange with countersink M10

Tightening torque 60 Nm

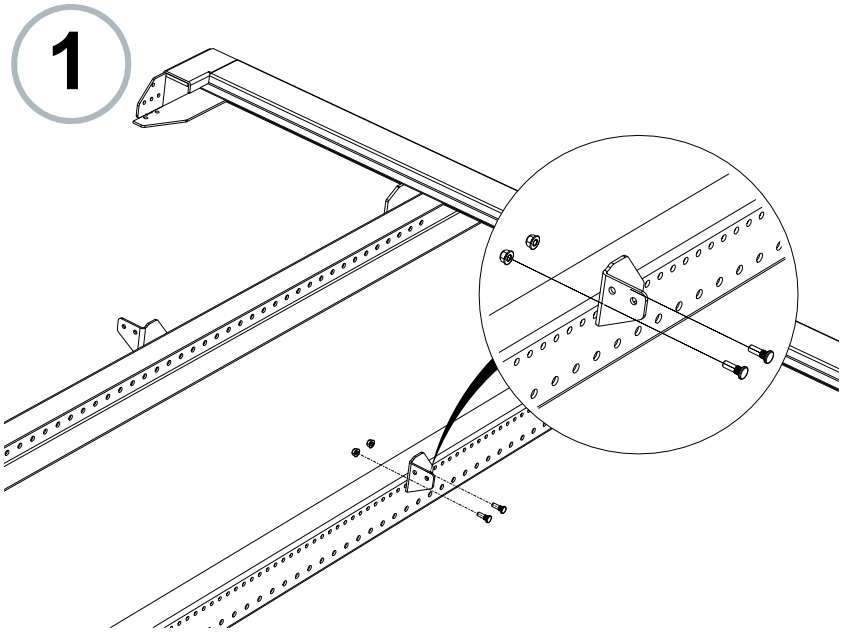
Knurled bolt and hexagon flange have to be taken from the **accessories Front cross beam frontside TSE no. 1375460.**

First you have to take the mean of the front cross beam frontside, and then it has to be screwed tightly.

5


270
Length ?
82
Distance ?
DREHPUNKT BEIM KIPPEL
center of rotation
CAD-D
EH-D

Positioning of first crossbar



In the area of the rear axle, the positions of the crossbar can very. This must be taken into due account by the customer.

Recommendation: Measurement from the rear axle to the front and to the rear carry out at the rear.

Knurled bolt M10x35

Hexagon flange with countersink M10

Tightening torque 60 Nm

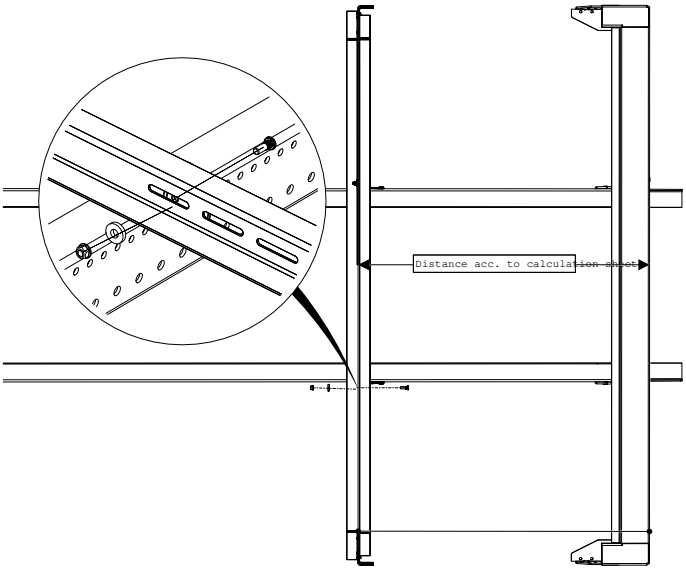
Knurled bolt and hexagon flange have to be taken – depending on the crossbar distance - from the accessories **Z-profile complete TSE no. 1376092 or TSE no.: 1376093**,

The first set crossbar varies according to the structural length.

Platform 7.350 to 9.400mm
First crossbar at 540mm

Platform up to 7.350mm
third crossbar at
1.290mm at 500er crossbar distance
1.415mm at 375er crossbar distance

2



Knurled bolt M10x35

Washer for screws with heavy roll pins M12

Hexagon flange with countersink M10

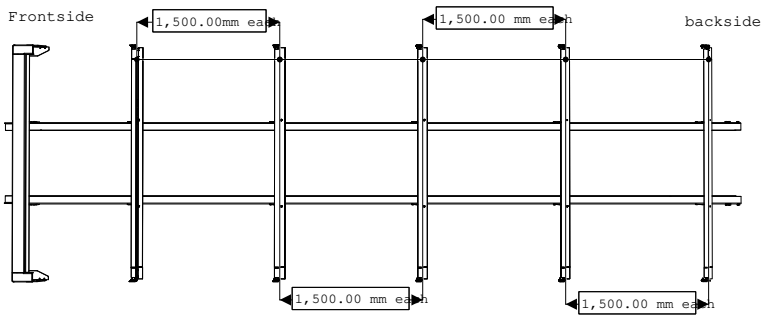
Tightening torque 60 Nm

Knurled bolt, Washers and hexagon flange have to be taken-, depending on the crossbar distance- from the accessories **Z-profile complete TSE no. 1376092 or TSE no.: 1376093.**

First you have to take the mean of the crossbeam, and then it has to be screwed tightly.

Positioning of main crossbar

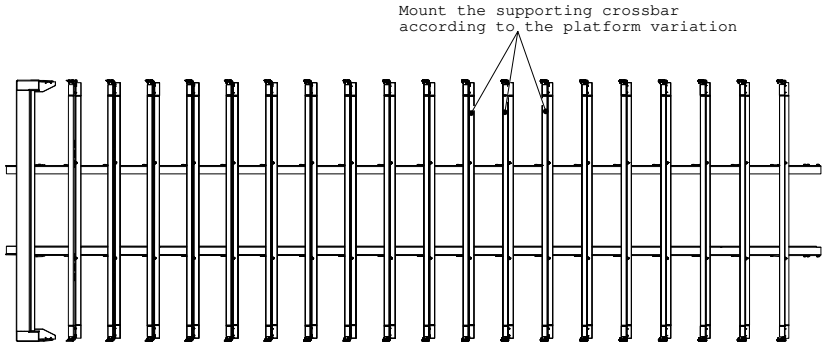
1



The mounting of the other crossbars depends on the length of the vehicle and the position of the first crossbar.

Positioning of the supporting crossbar

1



With a platform length of up to 7.350mm and a cross beam distance of 375mm, the front two crossbar must be mounted with a distance of 406.25mm (this equals one hole more distance).
This is done to reduce the gap at the front to the head frame.

The number of crossbars depends on the required possible selective load on the floor and on special characteristics of structure, e.g. position of axles, tank nozzles or similar points.

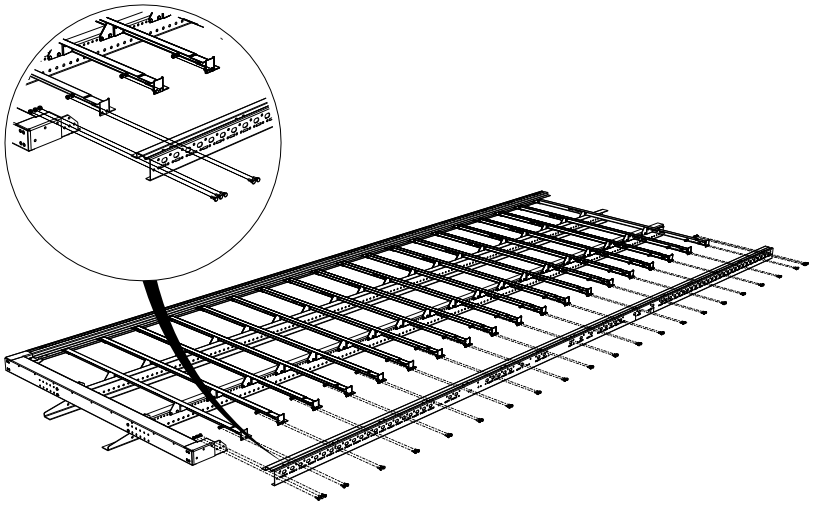
Concerning the distance between the crossbars, the following has to be regarded:

1st variation:
Crossbar distance 375mm up to 26 t (permissible total weight) accessible with lift trucks

2nd variation:
Crossbar distance 500mm up to 18 t (permissible total weight) not accessible with lift trucks

Mounting of outer frame and tie-down ring

1



Knurled bolt M10x35

Hexagon flange
With countersink M10

Tightening torque 60 Nm

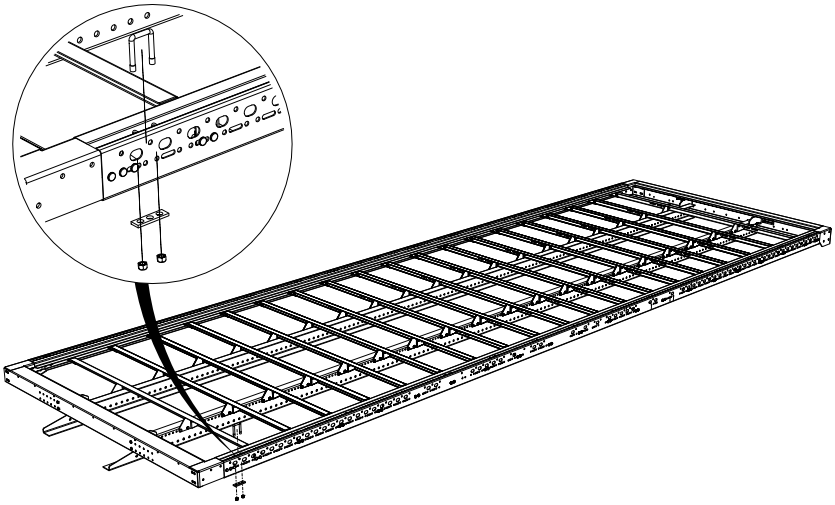
Tie-down ring kit complete

Knurled bolt and hexagon flange have to be taken – depending on crossbar- from **Z-profile complete TSE no. 1376092 or TSE no.: 1376093**.

Hang the outer frame in and then mount it.

Mount the tie-down ring set!

2



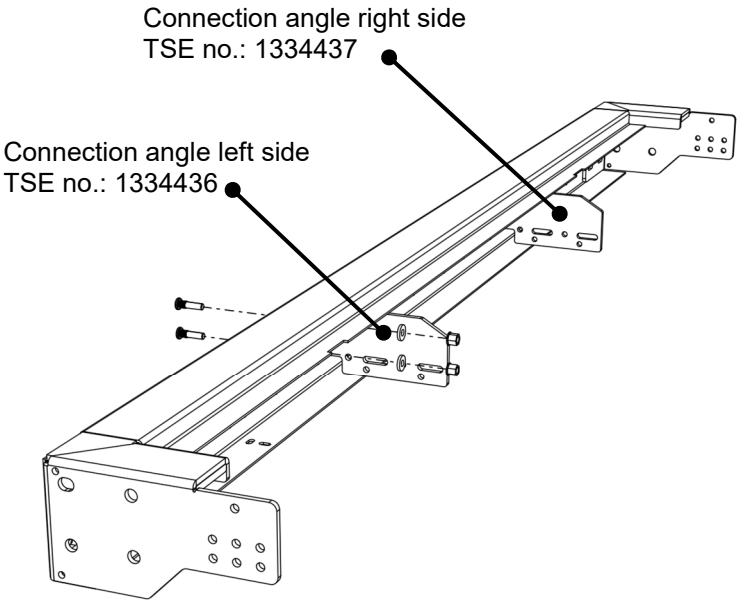
Tie-down ring kit complete

The tie-down ring kit has to be taken from Steel platform complete
TSE no.: 1376199.

Mount the tie-down ring kit!

Mounting of front cross beam backside

1 Mount the connection angle to the front cross beam.



Knurled bolt M10x42

Washer D10.5

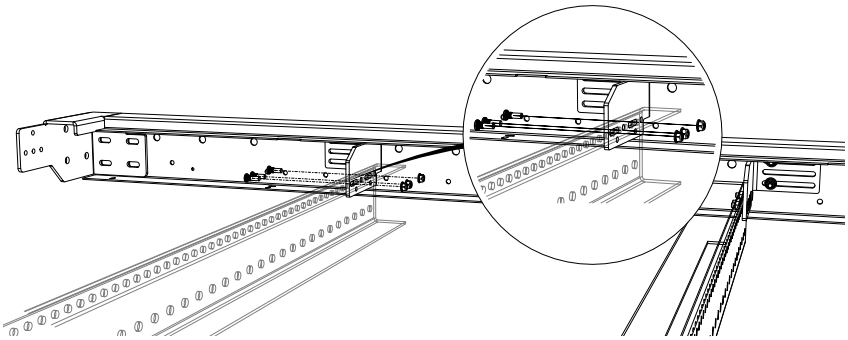
Hexagon flange with countersink M10

Tightening torque 60 Nm

Mount the front cross beam at the backside.
Do not tighten the knurled bolt at this point of time yet.

Knurled bolt and hexagon flange have to be taken – depending on crossbar- from **Z-profile complete TSE no. 1376092 or TSE no.: 1376093**.

2 Mount the connection angle at the auxiliary longitudinal beams.



Knurled bolt M10x42

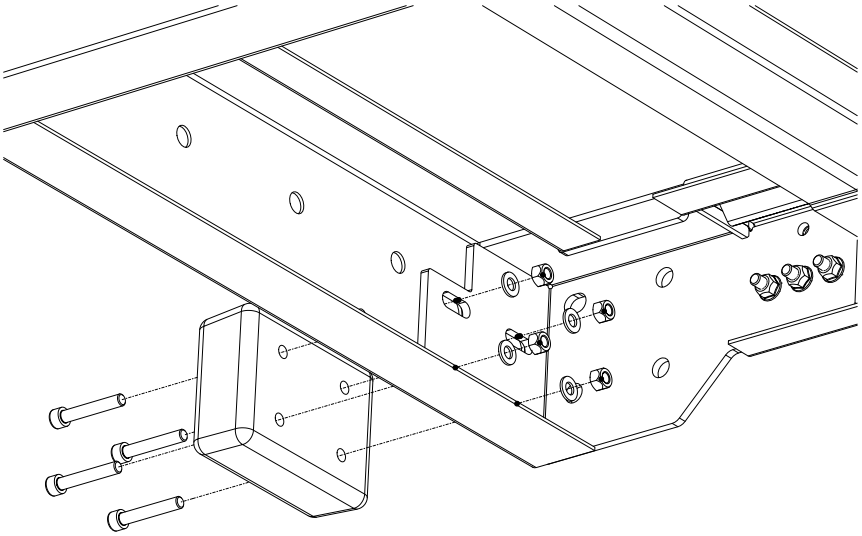
Hexagon flange with countersink M10

Tightening torque 60 Nm

Knurled bolt and hexagon flange have to be taken – depending on crossbar- from **Z-profile complete TSE no. 1376092 or TSE no.: 1376093**.

Mounting of the rubber buffers

1



Cylinder screw M10x60

Washer A10.5

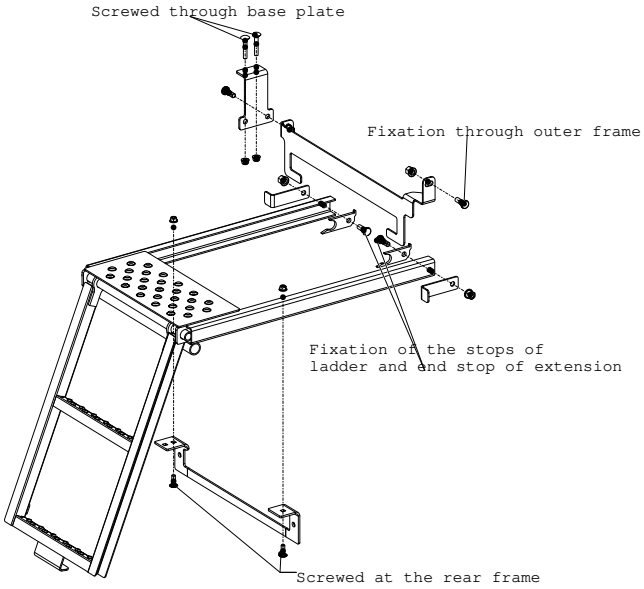
Hexagon nut M10

Tightening torque 25 Nm

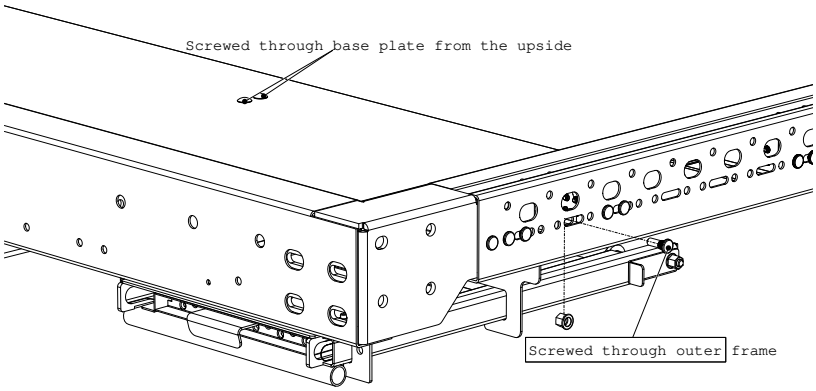
Cylinder screw, washer and hexagon nut have to be taken from the **Rubber buffer kit TSE no.: 600-20.303**.

Mounting of the ladder

1 Exploded view



2 Mounting at the side




Carriage bolt without nut M8X50

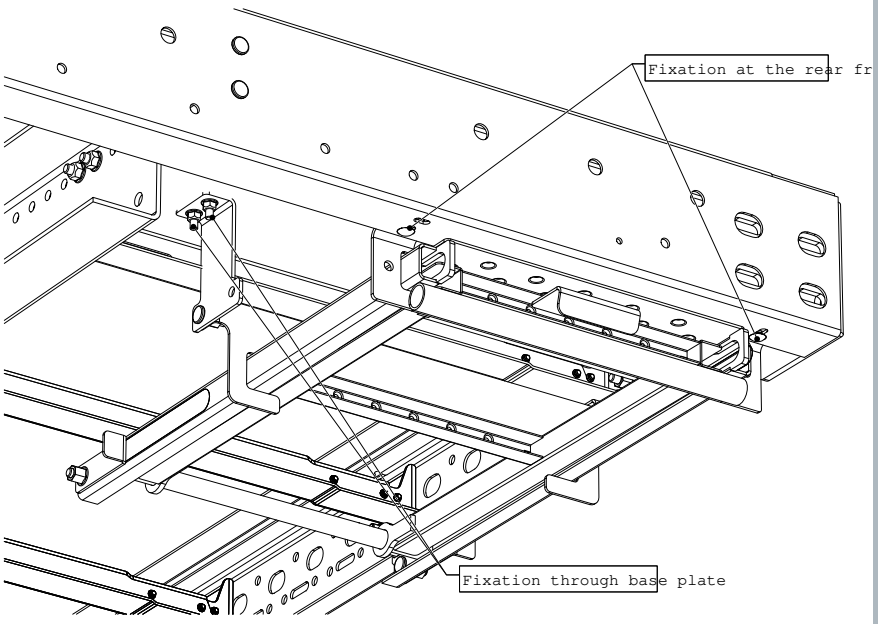

Tightening torque 36 Nm


Knurled bolt M10x35


Hexagon flange with countersink M10

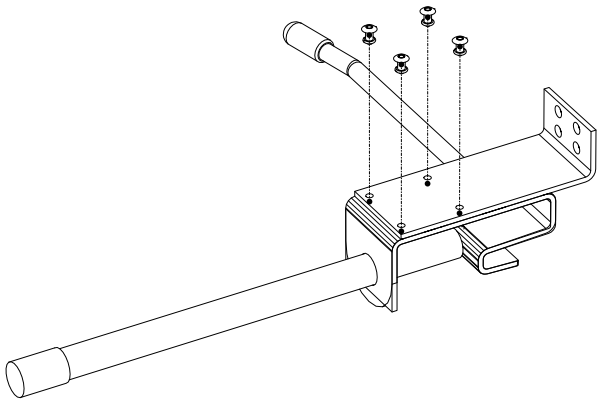

Tightening torque 60 Nm

3 Mounting downside



Mounting of door catch

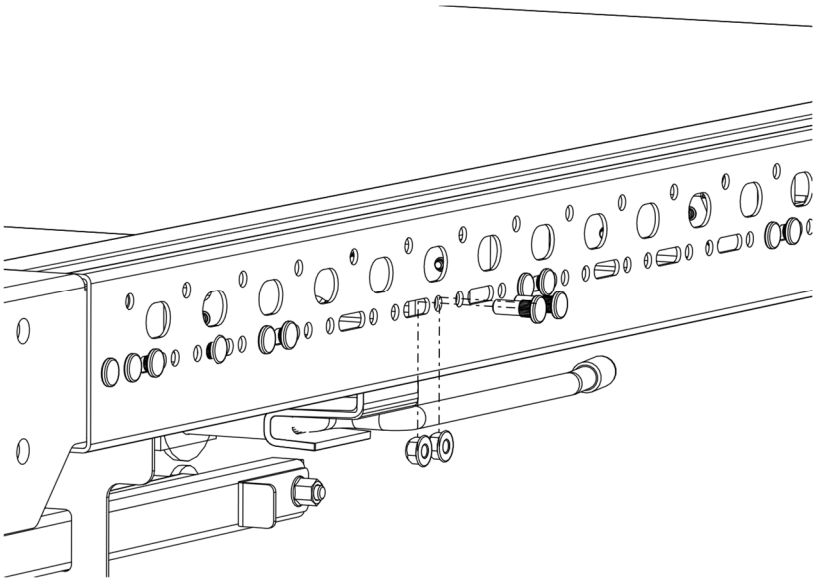
1



Hemlok rivet 6.5F
KL-BER 8.8-10.8mm

Rivets, door catch and holders have to be taken from **Door stop complete**
TSE no.: 600-20.304.

2



Knurled bolt M10x35

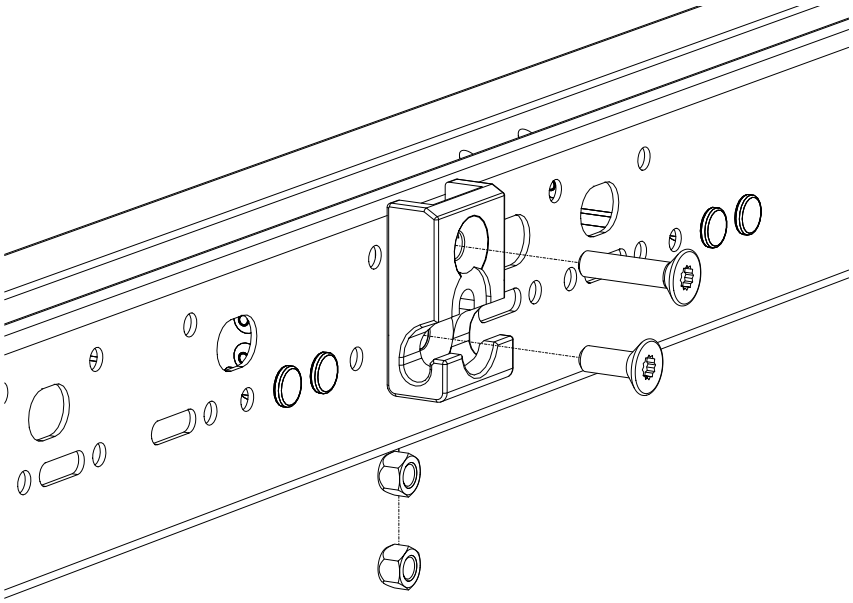
Hexagon flange with countersink M10

Tightening torque 60 Nm

Knurled bolt and hexagon flange have to be taken from **Door stop complete**
TSE no.: 600-20.304.

Mounting of stanchion foot

1



Countersunk screw with Torx drive M14x55

Countersunk screw with Torx drive M14x40

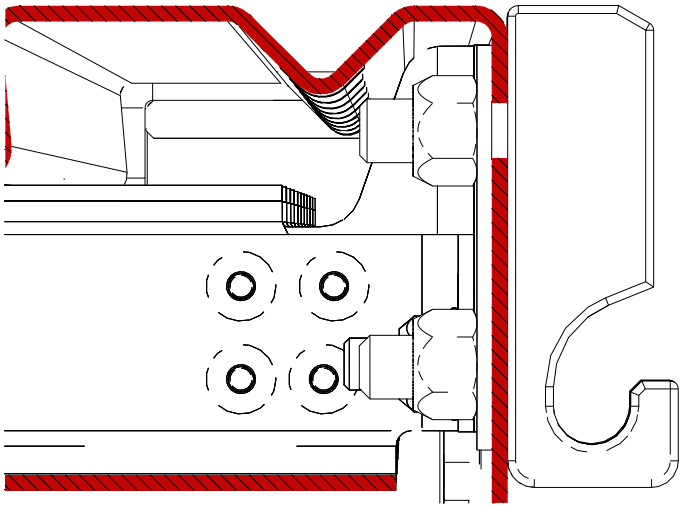
Hexagon nut M14

Tightening torque 190 Nm

Position of the stanchion foot according to calculation sheet

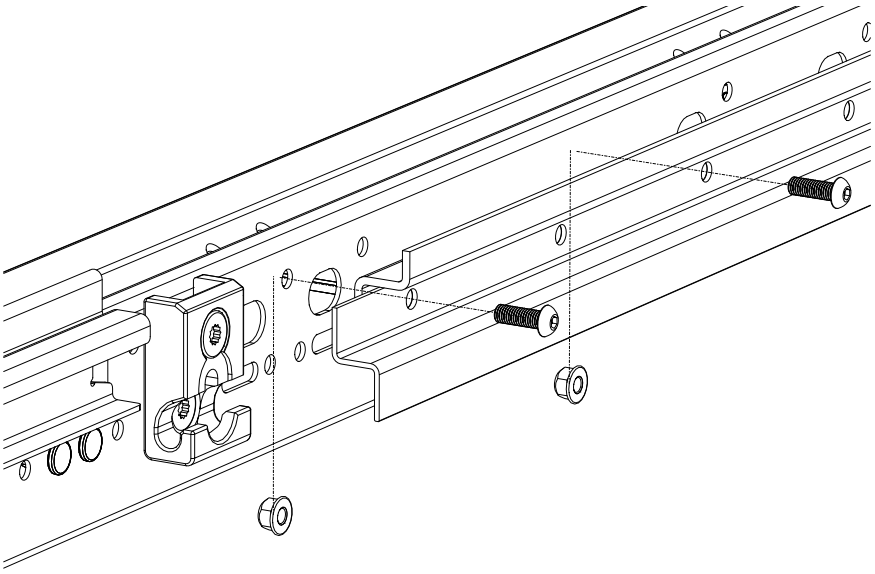
Boreholes have to be made by the customer.

2



Mounting of Z-pallet stop and tie-down rail

1

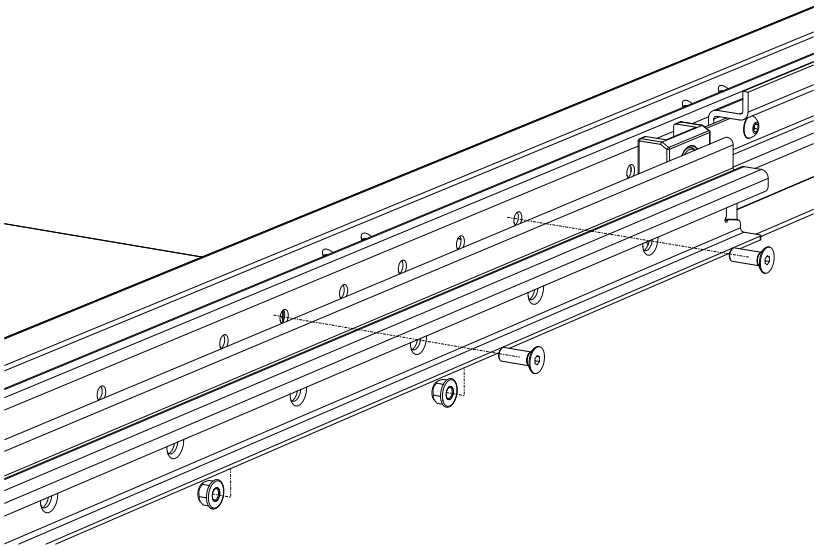


Fillister head screw without flange M10x30

Nut

Tightening torque 70 Nm

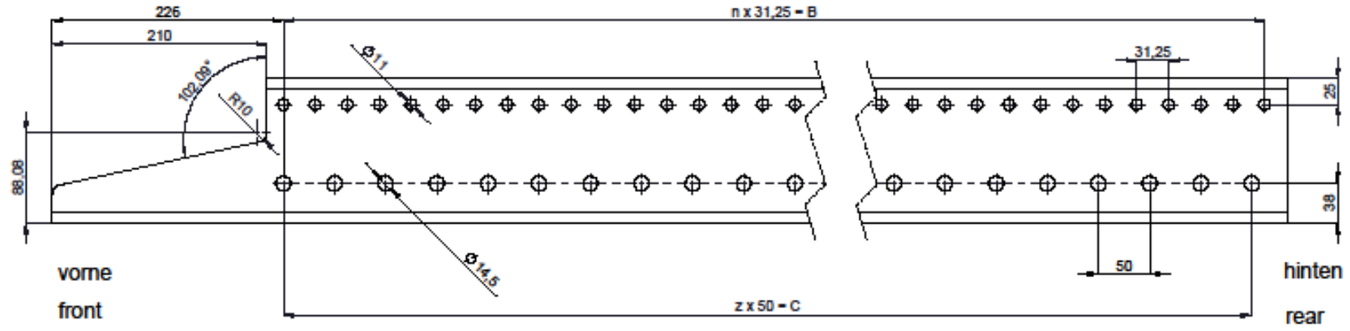
2

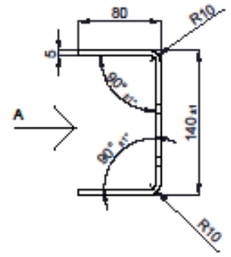


Countersunk screw with internal hex M10x30

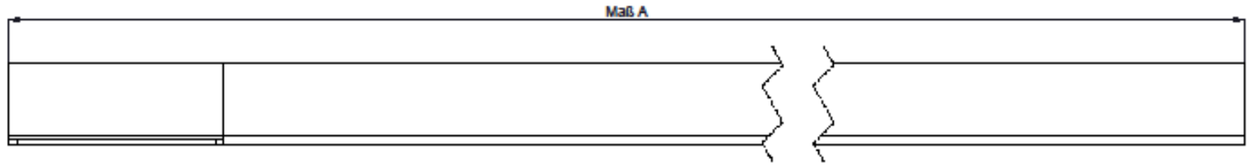
Nut

Tightening torque 70 Nm





Maß A = L.i.Li. + 90
Maß A = clear length + 90

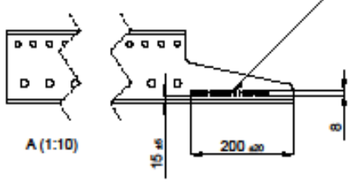


Längsträger immer hinten absägen
saw longitudinal beam at the rear

auch erhältlich in den Höhen 80, 120 und 180 mm
also available in hights of 80, 120 and 180 mm

(02) Beschriftung jeweils auf Innenseite vorne bei 7720 L.i.Li.:
LINKS 1332337 V | 1383499 R
oder
RECHTS 1332338 V | 1383540 R

bei 9400 L.i.Li.:
LINKS 1372244 V | 1383541 R
oder
RECHTS 1372308 V | 1383542 R



(01)

	z	C	n	B	A	Maß A = L.i.Li. + 90 Maß A = clear length + 90	Rohteil-Nr. links raw part num. left	Rohteil-Nr. rechts raw part num. right
						7720 mm	1383499	1383540
						9400 mm	1383541	1383542
						Länge im Licht clear length	Art.- Nummer links item number left	Art.-Nummer rechts item number right
links gezeichnet (drawn left)	151	7550mm	242	7562,5 mm	7810	7720 mm	1332337	1332338
rechts spiegelb. (right mirror image)	185	9250mm	296	9250 mm	9490	9400 mm	1372244	1372308

Allgemeintoleranz: Spanen DIN ISO 2768 - m T1 / T2
Kaltbiegen DIN 6935

Grenzabmaße für gebrochene Kanten in mm

0,3 - 0,5	3 - 6	6 - 30	30 - 120	120 - 400	400 - 1000	1000-2000	2000-4000
±0,1	±0,1	±0,2	±0,3	±0,5	±0,8	±1,2	±2

Rundungshalbmesser in mm			Winkelmaße in mm				
0,5 - 3	3 - 6	über 6	bis 10	0. 10-50	0. 50-120	0.120-400	0. 400
±0,2	±0,5	±1	±1°	±30'	±20'	±10'	±5'

links	gezeichnet	–.–.–	–
rechts	spiegelbild.	–.–.–	–

WICHTIG: Alle Kanten gratfrei!
Grenzabmaße für Stranggepresste Profile: DIN EN 755-9
Anodisch oxidierte Erzeugnisse aus Aluminium: DIN 17611

Zul. Abweichung für Stanzteile aus Stahl: DIN 6930-m
Freimaßtoleranz für Schweißkonstruktionen: A/E DIN 8570 T.1 - T.3
Schweißnahtvorbereitung: DIN 8551 T.1 und T.4 und DIN 8552 T.1
Schnittgrathöhen an Stanzteilen: DIN 9630

Oberfläche: feuerverzinkt nach DIN EN ISO 1461 60-80µ
Fläche : —
Umfang : —
3D Modell Ursprung: —

Zust.	Änderung	Datum	Name
03	Änderung Text	18.11.2019	Rutow
02	Beschriftung hinzu	01.07.2019	Rutow
01	L.i.Li. auf 9400	19.10.2018	Rutow
01	Rohteil-Nr. hinzu	19.10.2018	Rutow

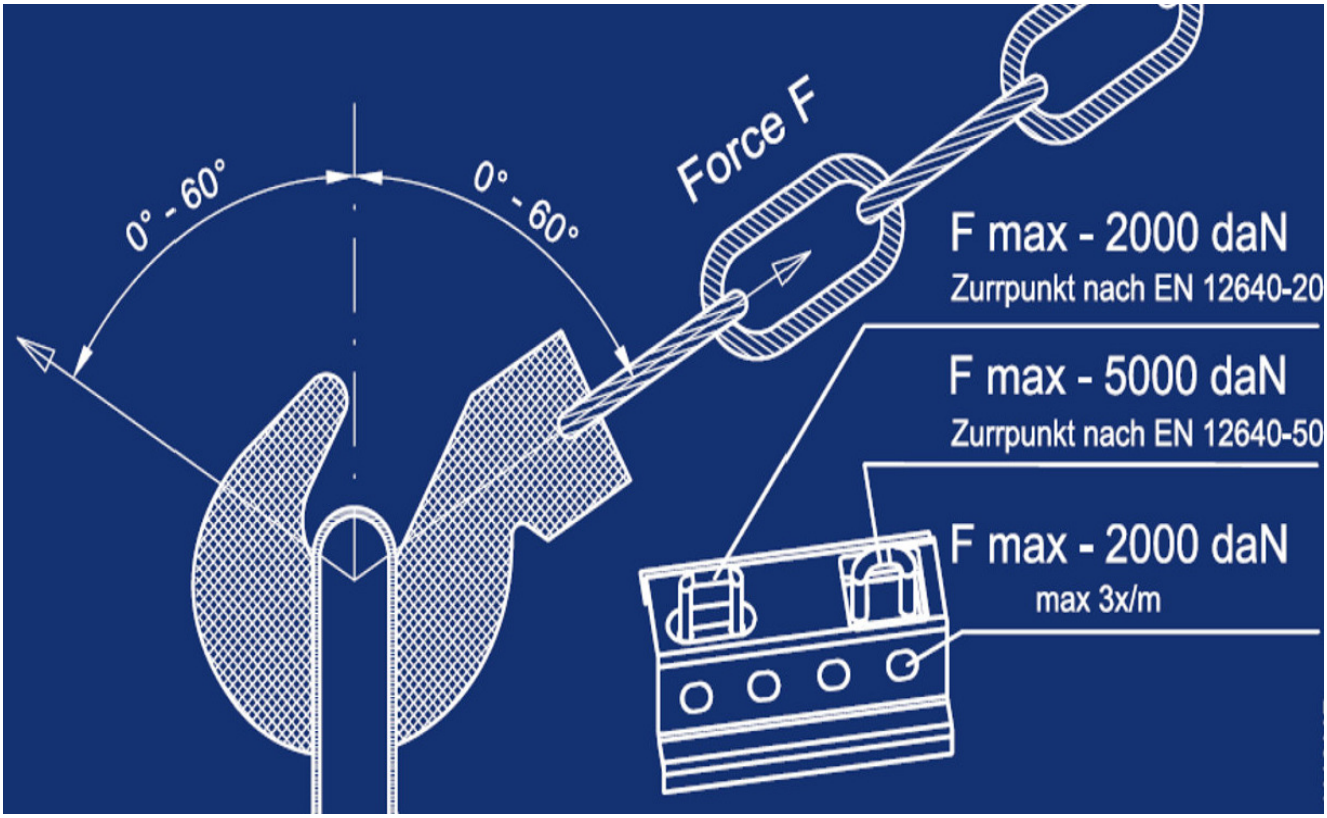
	Datum	Name
Bearb.	24.07.2018	B. Dingler
Gepr.	—	—
Norm.	—	—

TSE
TRAILER SYSTEM ENGINEERING

Maßstab: 1:5
Gewicht: 10,72 kg / m
Werkstoff: S355MC

Benennung: Hilfslängsträger 140 x 80 x 5,0
Stahlpritsche FL2
Longitudinal beam 140 x 80 x 5,0
Steel platform FL2

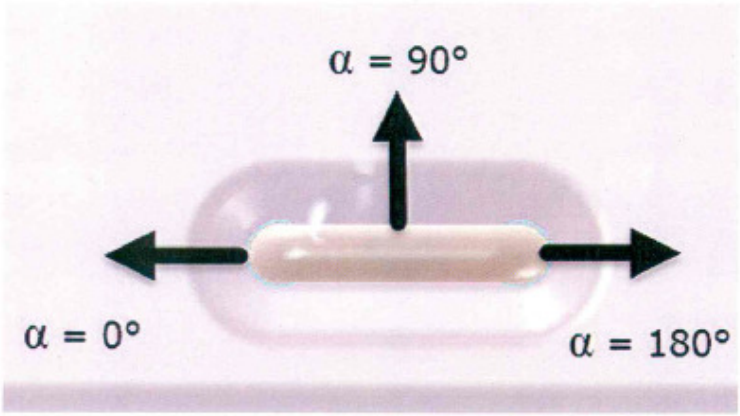
Zeichnungs-Nr.: 1332337-03
Blatt 1 von 1
SAP Dokument-Nr.: —
Ers.f.: — Ers.d.: —
A3

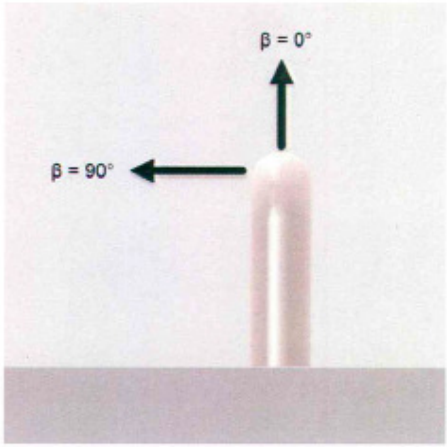


Folgende Neigungswinkel wurden geprüft:

Neigungswinkel α = 0° bis 180°
Neigungswinkel β = 0°bis 90°

Prüfkraft = Festigkeit x 1,25 = 3125daN
Festigkeit der Zurröse = **2500daN**





Notes

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Revision status

Revision status	Kind of change	Date	Name
00	New creation of mounting instruction	05 September 2018	Dingler / Maier
01	Chanching the knurled bolt	18 September 2018	Dingler / Maier
02	Addition of the illustration lashing loads and the manufacturer's certificate	24 January 2019	Laib / Maier
03	On page 9, section 2, both the image and the text have been changed	28 March 2019	Laib / Maier
04	The safety hints have been supplemented	15 May 2019	Maier
05	Chapter 5 and Chapter 6 have been supplemented with an information text	17 July 2019	Laib / Maier
06	In chapter 16, the drawing on page 23 has been adapted.	18 November 2019	Maier
07	Chapters 6, 8 and 13 have been added	26 November 2019	Maier / Rutow
08	crew 000-06.344 is replaced by 000-06.239	24 March 2020	Maier / Laib
09	Corrected tightening torques	22 September 2020	Boll
10	Corrected tightening torques	29 September 2020	Boll
11	Page 9, picture 1 and 2 changed	14 Oktober 2020	Boll
12	Page 4 changed	24.11.2020	Boll
13	Page 14, picture 1, screw from M12 to M14	10 January 2023	Laib

Erstellt	Geprüft und Freigegeben
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