DEIJ hijstechniek

USER MANUAL

COMPACT LIFTING BEAM 2019-036

This is a translation from the original user manual
V1.2
3-2023

Contents

1 Foreword

Thank you for purchasing your lifting equipment built by the company Deij Hijstechniek B.V. in Barneveld.

In this user manual you will find all the information to be able to work safely and correctly with the lifting tool . The use of the lifting equipment involves risks, improper use can be life-threatening for you and for bystanders. Therefore, before performing work with the lifting tool , you should carefully read and understand this instruction manual .

2 Reading guide

Warnings and instructions for working safely with the lifting equipment are included in this instruction manual. The instructions are provided with one of the pictograms indicated below. Please read these directions carefully!

	A note with additional information alerts the user to possible points of attention or instructions with a safety intent.
	**This comment points out the danger that can occur while working with or while working on the lifting tool!**

3 General information

3.1 Description and intended use

The lifting tool is used as an hoisting tool during the lifting of loads. Due to the beam, the force that comes on the crane hook is distributed over the lifting points of the lifting beam.

The lifting beam consists of a welded beam and two extendable beams with which the length can be adjusted. The length adjustment is secured with a locking pin with locking clip.

On the crane side, the hoisting equipment is equipped with attachment points for lifting shackles.

On the load side of the lifting beam, lifting points have been installed for lifting shackles to attach the load. The transport legs can be demounted for extra lift points.

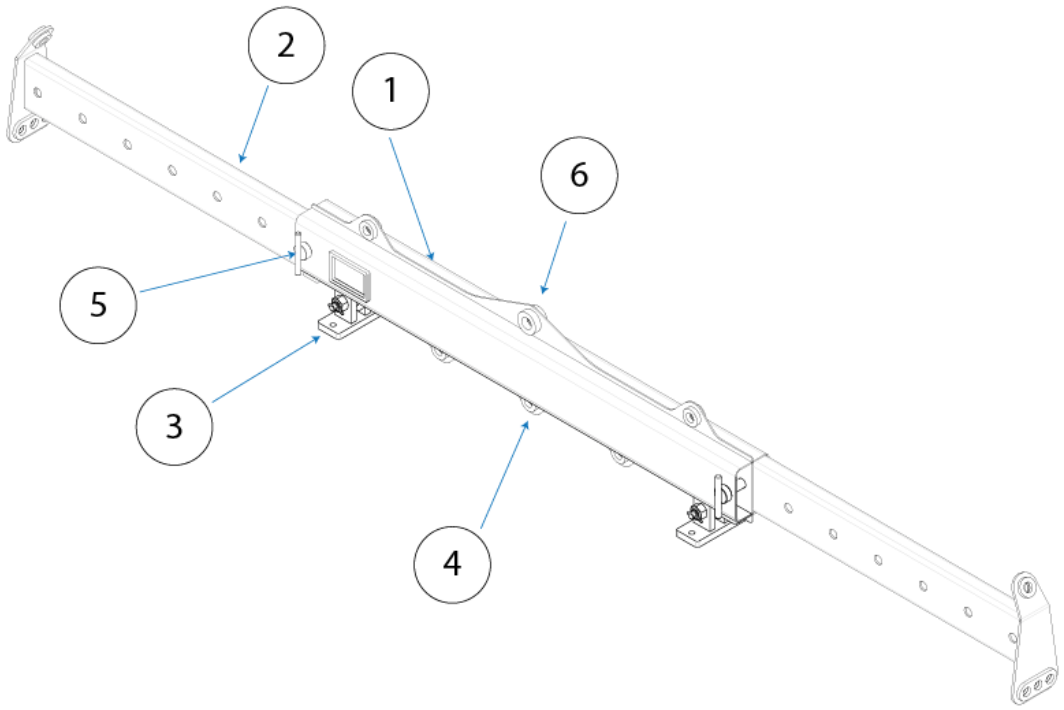

Figure 1: Lifting beam

1. Welded beam
2. Extendable innerbeam
3. Transport leg
4. Load side
5. Locking pin with locking clip for length adjustment
6. Hoist side

3.2 Manufacturer and technical data

Manufacturer:

Deij Hijstechniek B.V.
Stavorenweg 5
3771 NK Barneveld
The Netherlands

info@deijhijstechniek.nl

www.deijhijstechniek.nl
+31(0)342-745343

Specification		Description
Type	:	Lifting equipment
Name	:	Lifting beam
Dimensions	:	See technical drawing
Tool weight	:	45 kg
Project	:	2019-036
Maximum Workload (W.L.L.)	:	1.2 - 6.0 ton
Used test load*	:	23.54 - 117.72 kN
Safety factor*	:	2,0
Normal ambient temperature	:	-10 °C to 40 °C

* The test load is used for testing the tool. The safety factor was used for the calculation of the tool.

A type plate containing the details of the lifting equipment is affixed to the lifting tool. See an example below.

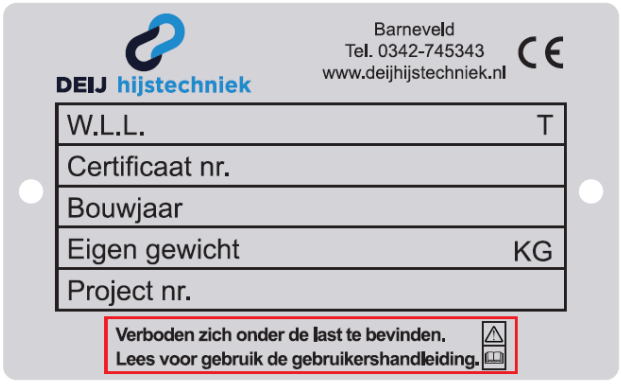

Figure 2: Example type plate

4 User acknowledgements

Only authorized persons who are sufficiently trained (in possession of a lifting certificate) may use the lifting equipment .

Danger to life and limb! Life-threatening not to follow the instructions in this chapter!

Any use other than those prescribed in the instructions for use may cause danger to the user and bystanders. Therefore, any use other than those stated in this instructions for use is not permitted, unless agreed in writing with the manufacturer.

If the lifting equipment is used for another application, the EC declaration of conformity drawn up by Deij Hijstechniek B.V. becomes invalid.

The following warnings and regulations must be observed at all times:

- Never exceed the workload (W.L.L.) of the lifting tool.
- The lifting equipment is not suitable for transporting people, this is absolutely prohibited.
- The lifting equipment is not suitable for transporting liquids, bulk or bulk goods.
- The lifting equipment must not be exposed to chemical influences such as acids, alkalis and fumes.
- Always use approved lifting equipment that has sufficient load-bearing capacity for the load and weight of the lifting tool.
- Read the instructions carefully and make sure that it is available to all authorized users of the lifting equipment.
- Modification of the lifting equipment is not permitted and is not the responsibility of the manufacturer.
- Always use the applied lifting points.
- There are no dangers associated with this machine due to vibration. The acceleration remains below 0.5 m/s2.

5 Safety

The lifting equipment is designed in such a way that unsafe situations are prevented as much as possible. In situations where risks are still present, personal protective equipment is used. Hazards are warned by means of pictograms on the lifting tool (if possible).

5.1 Personal protective equipment

	Wearing safety shoes is mandatory in connection with handling heavy construction parts!
	Wearing protective work clothing is mandatory!
	Wearing a safety helmet is mandatory!

5.2 Explanation icons

The following pictograms are affixed to the lifting tool. Missing or damaged icons should be replaced immediately.

Icon	Statement
	Beware of hanging load. Forbidden to be under a load. Read the user manual before use.
W.L.L. 1.2 - 6.0 ton	Maximum Workload (W.L.L.)

6 Working with the lifting tool

6.1 Checkpoints for use

Danger to life! Chance of falling load. In case of defects or the suspicion of defects, take the lifting equipment out of service and contact the manufacturer!

Before the lifting work is carried out, check the following points:

Lifting control points:

- Is the structure not bent, damaged or extremely rusted?
- Is there no cracking in the material?
- Isn't the lifting agent too heavily contaminated?
- Aren't the lifting eye and the corresponding pen more than 10% worn out?
- Are the shackles, slings, chainwork or other lifting equipment suitable?
- Are there no rough working or heavy running structural parts?
- Are all axles secured; Have the locking pins been placed?
- Are all bolts, nuts and attachment points secured?
- Are all stickers and type plates in good condition and is the W.L.L. readable?
- Are all lifting equipment inspected?

Checkpoints specific for the work to be carried out:

- Check whether the lifting equipment is suitable for the intended purpose;
- To avoid overloading, you must determine the weight to be lifted.
- Make a correct estimate of the center of gravity to prevent skewed hoisting.
- If necessary, apply a device against shifting of the load or tools during the lifting of the load!
- Before moving the load, make sure that there are no unauthorized people in the work area.

Danger to life! Chance of exceeding workload! If the type plate or W.L.L. is not present or illegible, the lifting tool may not be used!

Heavy-running structural parts may indicate overload. If in doubt, put the lifting equipment out of operation and have it checked by an expert.

6.2 Maximum workload

Never exceed the maximum workload (W.L.L.) of the lifting beam .

The maximum load per configuration is calculated by the manufacturer, it is also indicated on the lifting beam. It is absolutely forbidden to exceed these. The maximum workload depends on the load, attachment and setting of the lifting tool, follow the instructions in the following workload table on the next page.

In the workload table you can read what the W.L.L. is of that specific situation for the required distance and the lifting points used.

Only use the following shackles:

Lifting eye*	**Shackle**
A	Green Pin G-4163 6,5T
B and C	Green Pin G-5263 5T
D,E,F and G	Green Pin G-4163 3,25T

* The position of the lifting eyes can be found in figure 3 on the next page.

Workload table

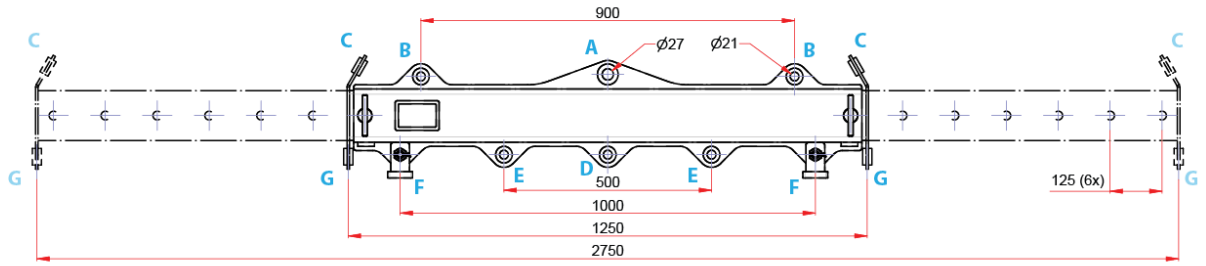

Figure 3: Load possibilities

Situation	Lifting eyes	Distance (mm)	W.L.L. (T)	Sling angle
1	CG	1250	6	60°
2	CG	2750	6	60°
3	AD of BD	0	3,2	60°
4	AE of BE	500	6	60°
5	AF of BF	1000	6	60°
6	AG of BG	1250	4	60°
7	AG of BG	1500	3,5	60°
8	AG of BG	1750	3	60°
9	AG of BG	2000	2,5	60°
10	AG of BG	2250	2	60°
11	AG of BG	2500	1,5	60°
12	AG of BG	2750	1,2	60°

6.3 Explanation sling angle per lifting eye

Avoid unnecessary loading on the lifting equipment. Check that the correct lengths are present to achieve the prescribed sling angle.

Lifting eye A

The lifting eye at A is for upright lifting

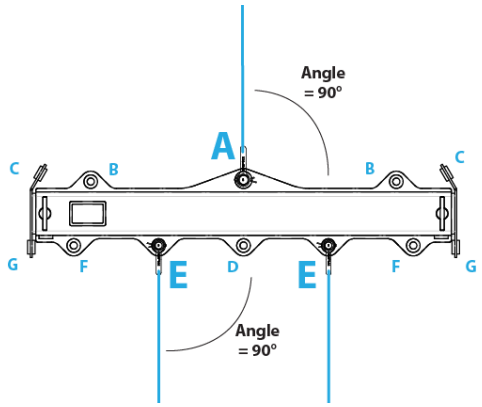

Figure 4 Upright lifting in A-E

Lifting eyes B

The lifting eyes B may be lifted at a maximum sling angle of 60°. The sling angle may be smaller (45° or 30° or upright) but never larger.

In this case, we are talking about an outside corner of 30 degrees or less. See figure 5 on the right.

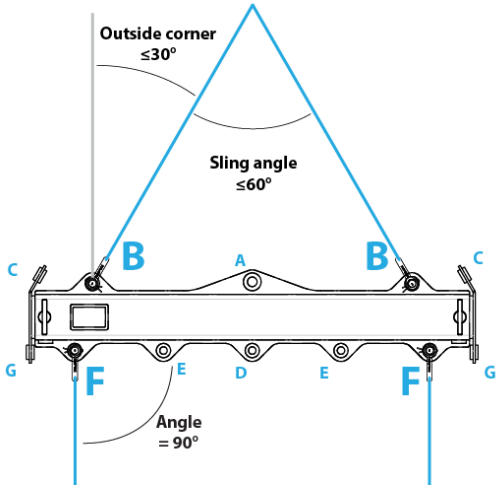

Figure 5 Sling angle in B-F

Lifting eyes C

The lifting Eyes C are constructed at an angle and must be lifted at a sling angle of exactly 60°.

This results in an outside corner of 30 degrees. See figure 6 on the right.

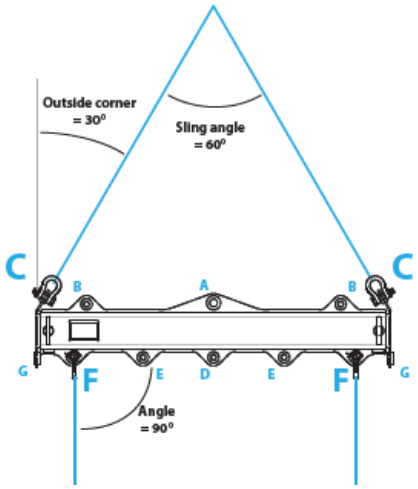

Figure 6 Sling angle in C-F

Lifting eyes D, E in F

This concerns the lifting eyes on the load side. See the figures on this page.

In lifting eyes D, E, and F only hoist upright.

Lifting eye G

This concerns the lifting eyes on the load side. For hoisting in G there is 2 situations. Seen from the front view of the tool, hoisting has to be done upright. (See figure 7).

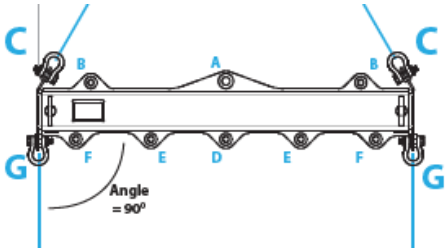

Figure 7 Front view of upright hoisting in G

Situation 1

When hoisting upright with lifting eye G use the middle lifting eye(see figure 8)

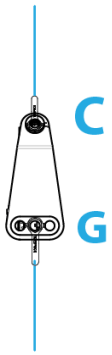

Figure 8 Side view of upright hoisting in G

Situation 2

When hoisting with 2 shackles use the the outside lifting eyes. (see figure 9) Make sure that the sling angle is 60 degrees maximum. This results in an outside corner of 30 degrees or less.

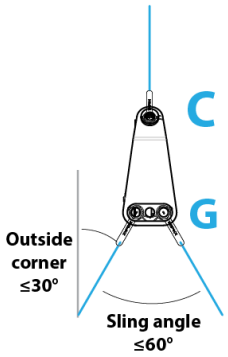

Figure 9 Side view of sling angle in G

6.4 Connecting to the hoisting device

To connect the lifting tool to the hoisting device, follow the following instructions:

- Consider the different workloads as mentioned in chapter 6.2
- Attach the lifting beam with suitable hoisting equipment, use the shackles as mentioned in chapter 6.2
- Put the lifting beam (if necessary) in the desired configuration (length) make sure that both sides are equal in distance;
- Check whether the locking pin and clip of the length adjustment has been placed.(see figure 10)
- Check if the sling angle are as described in chapter 6.3
- Check the locking of lifting hook and pins (safety catch and locking pin working).

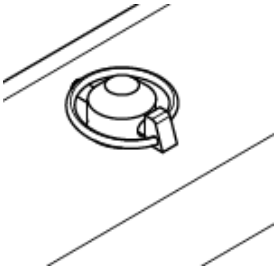

Figure 10: Securing in position

6.5 Connecting to the load

Follow the instructions below to mount load:

- Use the lifting points GG, FF, EE or D as explained in the previous chapters.
- Use suitable hoisting equipment, use the shackles as mentioned in Chapter 6.2
- Make sure that the lifting beam hangs straight and the lifting points are evenly loaded.
- Make sure that the load hangs directly under the lifting hook, a skewed load is not allowed.
- The load must always be lifted upright as described in Chapter 6.3

6.6 Hoisting

Danger to life and limb! As an operator, you are responsible for the load and its movements. Stop working if safe use is not possible.

- Place the lifting device under a light tension with the hoist device so that the lifting beam is loaded but the load is not yet lifted. Check the lifting agent, the load and the environment before lifting the load.
- Make sure that the lifting beam hangs straight and the lifting points are evenly loaded. Check that the load is in balance. Re-apply the lifting tool if the lifting beam or load is tilted.
- Never go under a hanging load!
- Never leave a hanging load unattended or longer than necessary.
- Move the load to the desired location. Ensure clear communication between the people involved.
- Gently lift the load into position, to avoid damage.
- Lower the load on a firm and even surface.
- Use a steering line if this is necessary.

6.7 Uncoupling

The following instructions apply to disconnecting the lifting tool:

- The load should only be released when it is stable on the ground.
- Detach the lifting agent from the lifting hook.

7 Maintenance

7.1 General

Have maintenance and inspection carried out only by competent persons.

Do the maintenance work within the prescribed periods to ensure the proper functioning of the lifting equipment.

Place the lifting tool on a solid surface to carry out maintenance.

If in doubt about defects, always contact the manufacturer!

Audit work	Term
Control of fatigue, fractures, damage, corrosion, cracking, wear and loose joints.	With every use
Inspection by expert	1 year
Inspection by manufacturer	4 years

In the event of damage, bending, cracking, etc., the lifting equipment must be examined and retested by the manufacturer. For safety reasons, use is no longer permitted and the manufacturer should be contacted.

7.2 Cleaning

In case of excessive contamination, clean the lifting equipment with a high-pressure cleaner. Make sure that applied stickers are not removed. During cleaning, do not aim at the stickers. After cleaning, blow the lifting tool dry and, if necessary, lubricate the moving parts. If stickers are damaged, contact the manufacturer to order new stickers.

8 Transport, storage and disposal

8.1 Transport

The design of the lifting beam is made in such a way that it can stand on its own with the transport legs mounted.

For loading and unloading, the lifting beam must be in the shortest position;

Make sure that the lifting equipment is properly secured during transport, with suitable lashing tools.

8.2 Storage

If required clean the lifting tool (as described in chapter 7.2), before storing the product.

Provide a dry and clean storage location (temperatures from -10 – 40 degrees);

Place the lifting tool in a place where the risk of damage and tripping is minimal.

When commissioning after (long-term) storage of the lifting equipment , it must first be visually inspected.

Make sure the storage is dry and frost-free to avoid unnecessary wear and tear.

8.3 Disposal

For the disposal of the lifting equipment, follow locally applicable (environmental) regulations.

9 EC Declaration of conformity

This is an example consult the original!

DEIJ hijstechniek
STERKE SAMENWERKERS

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3771 NK Barneveld
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info@deijhijstechniek.nl
www.deijhijstechniek.nl

CERTIFICAAT HIJSMIDDELEN

CERTIFICATE OF HOISTING EQUIPMENT

Certificaat nr :
Registratie nr :

Ondergetekende verklaart namens zijn firma, dat onderstaande gegevens juist zijn en dat het omschreven hijsmiddel en alle gebruikte onderdelen overeenkomen met de bepalingen van de EG-Machinerichtlijn 2006/42/EG, bijlage II-A.

The undersigned certifies on behalf of his company, that below particulars are correct and that the described hoisting equipment and the all used parts are according to the regulations of the EG Machinery Directive 2006/42/EG, appendix II-A.

Referentie klant : *Reference customer*

Geleverd aan : *Supplied to* Naam, Straat, Postcode en Plaats

Werklast WLL : 1,2 - 6,0 Ton *Working load limit*

Fabrikant : *Manufacturer* Deij Hijstechniek B.V., Stavorenweg 5, 3771NK Barneveld

Omschrijving : Compact evenaar uitschuifbaar *Description*

Afmetingen : 1250mm uitschuifbaar naar 2750mm, volgens tekening: 2019-036B *Measurements*

Eigen gewicht : 45 kg *Net weight*

Materiaalsoort : Diverse soorten staal *Kind of material*

Warmtebehandeling : Geen *Heat treatment*

Afwerking oppervlak : Gespoten *Surface finishing*

Vervaardigt volgens norm : EG-Machinerichtlijn 2006/42/EG, bijlage II-A *Manufacturing standard*

Project nummer : 2019-036B *Project number*

Keurings frequentie : 12 Maanden *Frequence of inspection*

Proefbelasting PL : 23,54 - 117,72 kN *Proofload applied*

Toepassing : Alleen voor het hijsen van goederen. *Application*
Lees voor gebruik altijd de gebruikers handleiding!

Naam, adres van keurbedrijf / leverancier Name and addres of examination company / supplier	**Gegevens betreffende keuring, levering, veranderingen of reparaties** Data of examinations, delivery, changes or repairs	**Keuringsdatum / Leveringsdatum** Date of examinations / Date of supply	**Handtekening deskundige** Signature of competent person
Deij Hijstechniek BV Stavorenweg 5 3771 NK Barneveld	Nieuw geleverd	2022	

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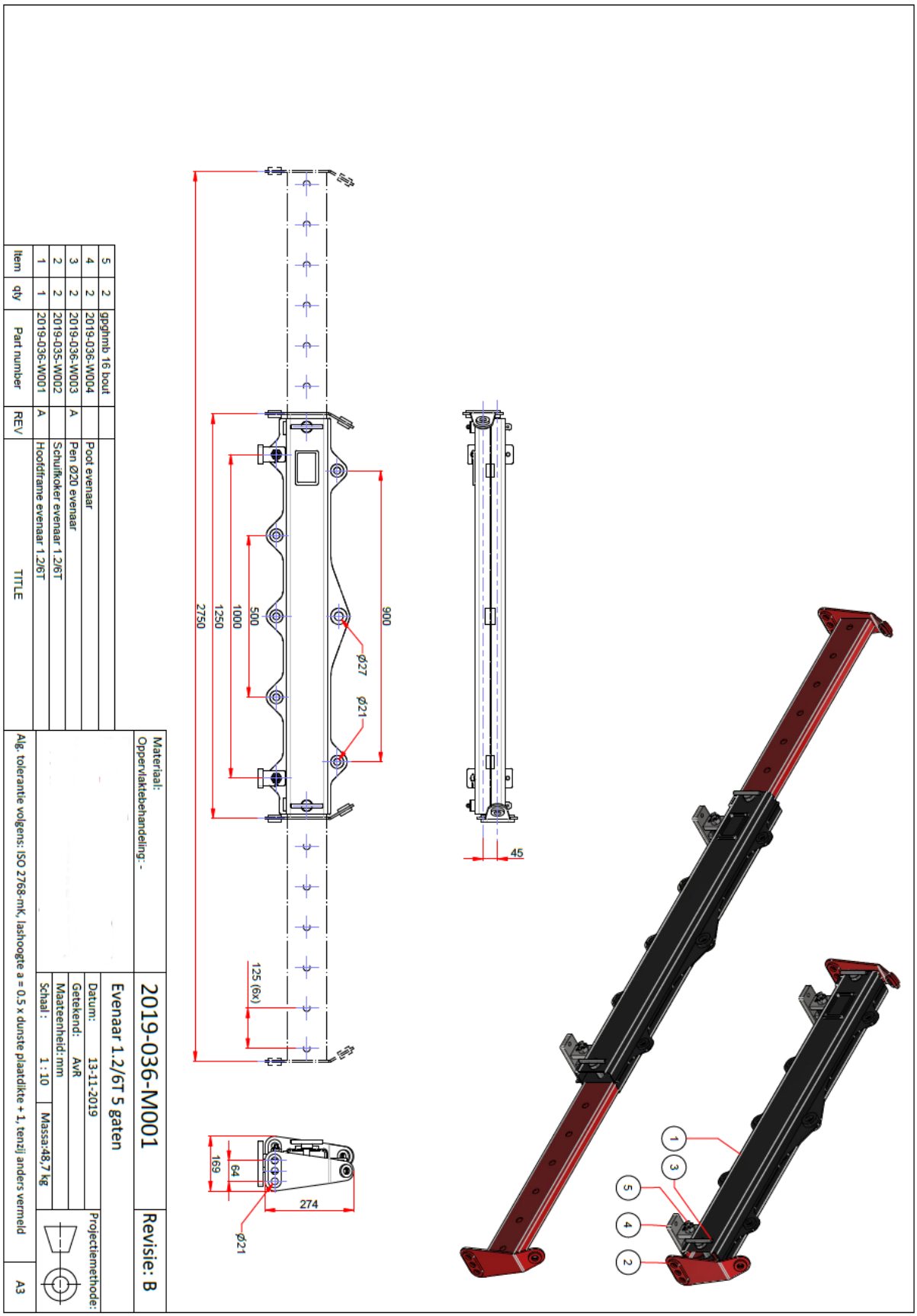
10 Technical drawing



11 Disclaimer

Amendments

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