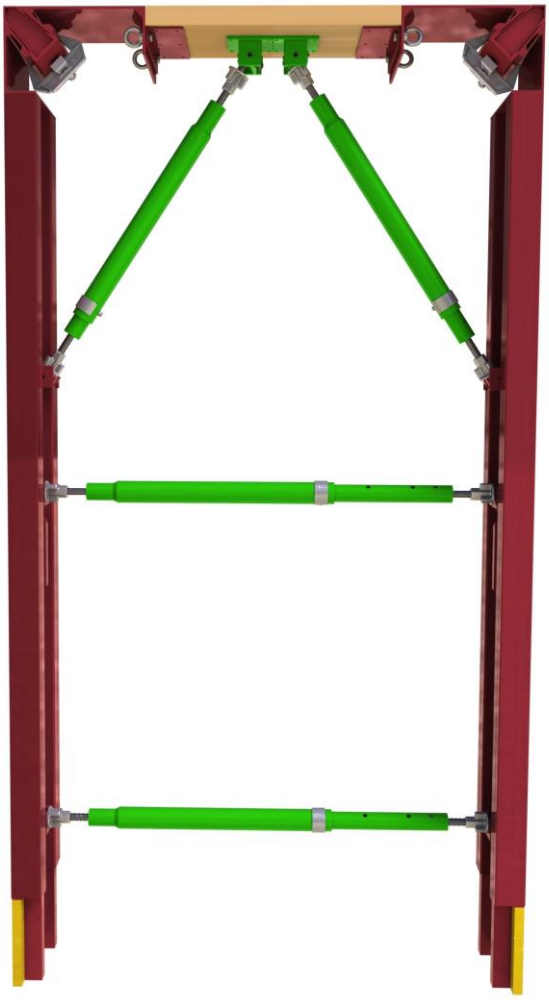
TIMRON door formwork with vario corner element VE

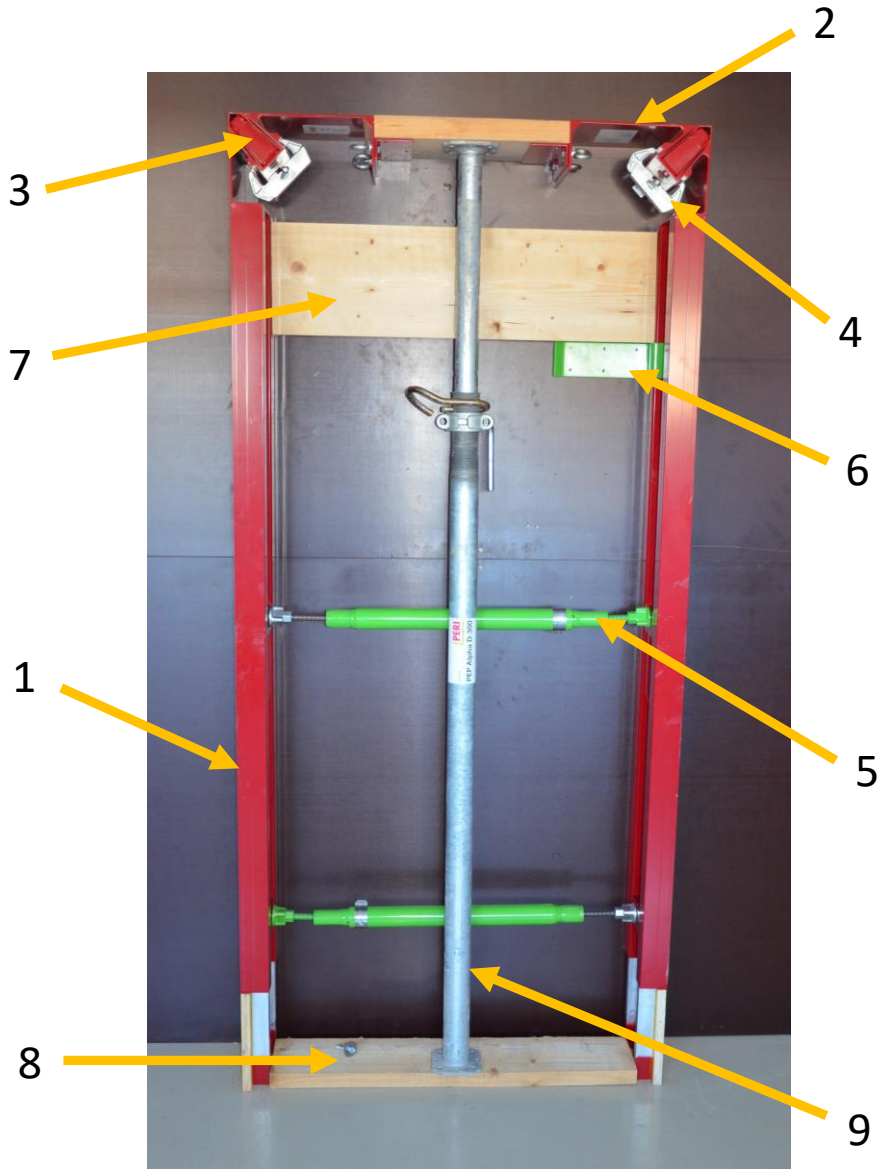
Instruction for assembly and use 04 / 2020



Content

TIMRON door formwork - overview

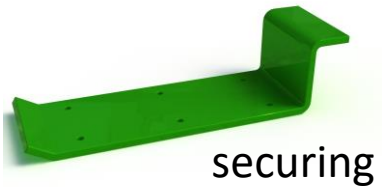
door formwork with vario corner element VE



1 formwork element SE
2 vario corner element VE
3 corner wedge SEK
4 formwork clamp
5 multi strut MS
6 securing aid
7 stop fillet
8 bottom plank
9 prop/multi strut MS

TIMRON door formwork - main components

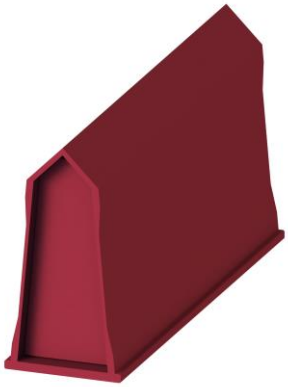
formwork element SE



securing aid FX

vario corner element VE

formwork clamp



corner wedge SEK

multi strut MS

Note: Before using the door formwork please read the following instruction for assembly and use!

Target groups

Companies

This instruction for assembly and use is directed to companies that do

- use the formwork for shuttering and striking or
- use the formwork for concrete building or
- have subcontractors use the formwork

Experts

The coordinator for safety and health matters

- will be named by the building contractor
- has to detect possible risks during the planning phase
- defines measures that protect from risks
- prepares a safety and health plan
- coordinates the safety measures of companies and workers, thus they do not endanger each other
- ensures compliance with the safety and health measures

People qualified for examination

Due to expert knowledge acquired through professional training, professional experience and recent professional activity, the person qualified for examination has reliable knowledge of safety-related matters and is able to properly carry out examinations. Different expert skills are demanded depending on the complexity of the test procedure e. g. the scope of testing, type of testing or the use of specific measuring devices.

Technically qualified employees

Door formworks may only be used for shuttering and striking by professionally competent personnel. Those employees have to receive appropriate training and instruction including the following:

- explanation of the instruction for assembly, rebuilding and dismantling in an easily understandable manner and language
- description of safety measures for assembling, rebuilding and dismantling the window formwork
- naming measures to prevent the risk of objects falling

- information about the admissible load
- description of further risks related to the assembly, rebuilding and dismantling of the formwork

Note: In countries other than Germany you need to make sure to comply with the latest version of your country's national requirements and regulations!
In case there are no country-specific requirements and regulations for your country, we recommend acting upon German requirements and regulations.

* In Germany the following regulations shall apply : Regel zum Arbeitsschutz auf Baustellen 30 (RAB 30)
** The instruction shall be carried out by the company itself or by a qualified authorized person.

Additional technical documents

- instruction for assembly and use:
  window formwork
  shuttering formwork
  shuttering element
  length compensation

- operating instruction
  modular palett

  stacking rack

- brochure „simply perfect“

TIMRON door formwork - introduction

Intended use

Product description

TIMRON products are designed exclusively for commercial use by users with technical expertise.

TIMRON window formworks are formworks made from aluminum and can be used for different recess sizes used for situ concrete construction.
Different widths can be realized depending on the type of formwork.
The connection of different components is done by using the corner wedge SEK and the TIMRON formwork clamp.
The bracing of the formwork elements SE is done by using the multi struts MS and the strut couplers KP and KPD according to the needs on the construction site (see table…)
The stability of the door formwork is being secured by using a securing aid to mount the door formwork on the panel formwork.
Different colors indicate different formworks for each wall thickness

System dimensions

Formwork element SE including telescopic adjustment
Length: 192 cm / Width: 20 or 24 or 25 cm / Height: 6.7 cm
Vario corner element VE
Length: 88.5 -126 cm / Width: 20 or 24 or 25 or 30 cm / Height: 6.7 cm

Usage

The standard system can be used for doors of the following size:
Height: from 200 up to 250 cm
Width: from 88.5 up to 126 cm
Wall thickness: 20 or 24 or 25 cm

Instructions for use

Any deviation from the intended use of the system or any improper use which is not in compliance with the instruction for assembly and use leads to a safety risk.
Only original components manufactured by TIMRON are permitted to be used.
The use of other parts and spare parts than those mentioned above is not allowed.
Modifications to the original TIMRON components are inadmissible.

Instructions for appropriate cleaning and maintenance

The formwork elements may be cleaned after use in order to maintain the value and usability of the formwork components in the long run. Still, maintenance and repair may need to be carried out due to frequent use. In order to avoid unnecessary repair and maintenance please read and follow the instructions below.

A concrete release agent needs to be applied on the side of the formwork directed to the concrete. Furthermore, the concrete release agent needs to be applied on the telescopic rods in order to ensure quick and easy cleaning of the formwork. The concrete release agent needs to be applied thin and even.

During ongoing concrete work please apply the concrete release agent directly after striking the formwork and afterwards use a rubber scraper or brush for cleaning.

Do NEVER use a steel brush or metal scraper on powder-coated components.
Important: high-pressure cleaner

IMPORTANT: All dirt and remaining concrete need to be removed from the components of the window formwork and a concrete release agent needs to be applied directly after striking. This ensures the usability and durability of the formwork.

In order to reduce and avoid damages on the TIMRON formwork, the internal vibration needle shall be provided with a rubber cap to avoid “inserting” the vibrating head between the concrete reinforcement and the formwork facing.

Dimensions

Dimensions generally are given in centimeters (e. g. for illustrations)
Diverging dimensions e. g. given in meters are indicated in the illustrations

Notes on the components presented

The presentation of the components on the title page needs to be seen as system visualization. The assembly steps in this instruction for assembly and use are shown only for one size of components but are representative for other sizes included in the standard assembly.
Detailed description is partly left out for a better understanding (e.g. safety measures). The safety measures not indicated within the descriptions still need to be fulfilled. Safety instructions and load capacitates must be followed carefully. Modifications and deviations need to be approved by a separate static calculation.

Across all systems

General

The company needs to make sure that the instruction for assembly and use delivered by TIMRON is available and made comprehensible for the operator at all times.
The instruction for assembly and use can serve as a basis for the risk assessment. The risk assessment needs to be prepared by the company and the instruction for assembly and use can not be used as a replacement for the risk assessment.

You have to be in compliance with the safety measures and the admissible load capacities at all times.

Please follow the latest regulations and requirements of your home country in order to use and maintain TIMRON products.
Please check the material and the workspace on a regularly basis and especially before use for the following:
- damages
- stability
- function

Damaged parts need to be sorted out immediately and may no longer be used.

Do not remove safety components until they are no longer necessary.

Components provided by the customer need to be in compliance with the characteristics indicated in the instruction for assembly and use and the latest national regulations, requirements and standards.
Deviations from the instruction for assembly and use only are allowed after a further risk assessment executed by the company/customer. Appropriate work, operational and stability safety regulations need to be established based on the new risk assessment.

Before and after extraordinary occurrences affecting the safety and security of the door formwork the company/customer must:
- conduct another risk assessment in order to define measures to ensure the stability of the window formwork
- conduct an extraordinary inspection by a qualified person aiming to detect damages early in order to repair them and thereby ensure safe use

Extraordinary occurrence may be:
- accidents
- long period of non-use
- natural events such as heavy rainfalls, icing, heavy snowfall, storms or earthquakes

Assembly, rebuilding and dismantling

Only technically qualified people are allowed to assemble, rebuild or dismantle a door formwork. The technically qualified employees therefore need to receive proper training concerning specific risks in advance.

By means of the risk assessment and the instruction for assembly and use the company/customer needs to develop an assembly instruction in order to guarantee a safe assembly, rebuilding and dismantling of the door formwork.

Therefore all door formworks need to be checked for safe functioning by a technically qualified person before being ready for use. The results of the check need to be documented in a test report.

The company/customer is responsible for providing and ensuring the use of adequate safety equipment for the assembly, rebuilding and dismantling of the window formwork such as:

- safety helmets
- safety shoes
- safety gloves

The company/customer needs to:

- provide a safe work environment accessible via safe traffic routes and additionally shut off and indicate danger zones
- ensure the stability during all phases of construction and especially during the assembly, rebuilding and dismantling phase
- ensure the transmission of all occurring loads and show proof

Use

Every company/customer using door formworks or components thereof (directly or indirectly) is held responsible for the proper condition and maintenance of the equipment.

The coordinator for safety and health matters has to coordinate the teams and point out possible reciprocal risks and dangers when different companies are using the door formworks at the same time or directly one after another.

Across all systems

Striking the formwork components shall only be done after the concrete has cured and the person in charge has given the corresponding instructions.

Storage and transport

Formwork components need to be secured safely when stored and transported.
The lifting gear and sling may only be taken off when the formwork components have been put down safely and are no longer moved. Do not drop the components!

When moving the components:
Please make sure that accidentally falling over, falling apart, slipping, dropping or rolling away will be avoided.
No person may be present in the danger zone underneath the load!

The ground must be sufficiently loadbearing for the transport. You may only use adequate lifting gear and only secure the components on the indicated lifting points.
When moving or transporting the components please remove loose components and secure them separately.

Note : Transport units need to be stacked and secured according to professional technical standards. You need to be in compliance with the national traffic rules and regulations for the transport!

Modular pallet for storage and transport of the door formwork

Instruction for assembly – TIMRON door formwork

Mount the door formwork with vario corner element VE

Note: Carefully read the following instruction before starting!
Division of panel formwork. Please make sure that no strain anchor hits a formwork element.
The assembly always needs to be carried out horizontal on a levelled ground in front of the installation point/panel formwork

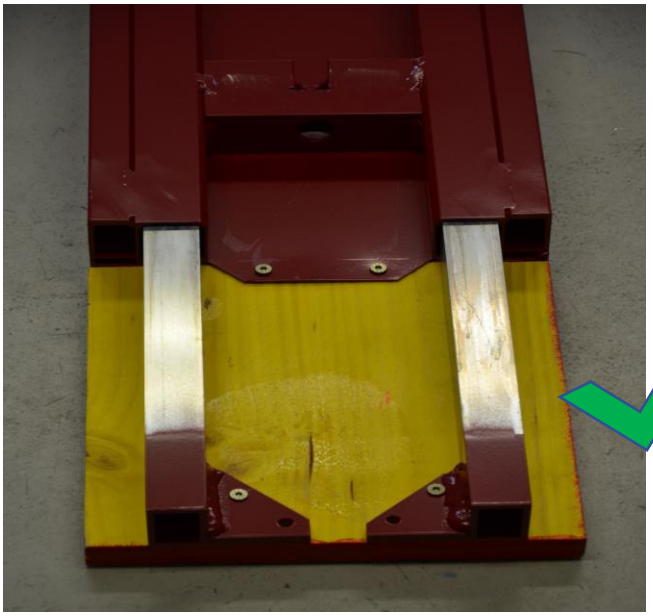
1

Adjust the formwork elements SE to the corresponding door height
Door height = formwork element SE cm plus wooden plank

2

Use 4 screws 5 x 25 mm to mount the wooden plank on the aluminum telescope.
Do not use nails!

3

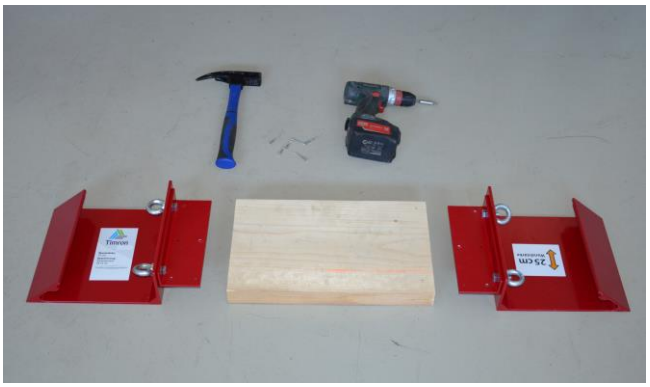


The formwork element SE has been adjusted to the corresponding door height

4

The formwork element SE is now ready for use

5



Two vario corner elements VE are connected via a wooden plank (size of the plank depends on the size of the recess)

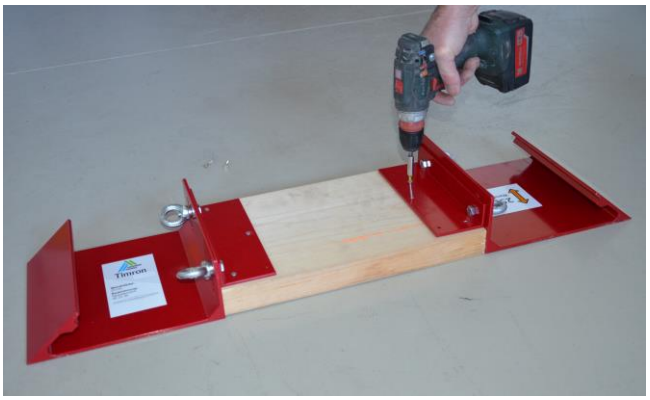
6

Ring nuts are loosened by using a roofing hammer. Afterwards the wedge is adjusted to the wood thickness and the ring nuts are tightened again.

7

The wooden plank is then screwed on the vario corner element VE.

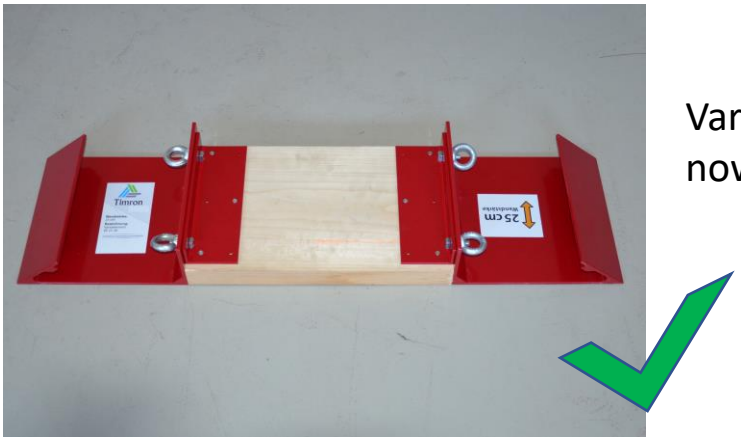
8



The second vario corner element VE is also connected to the wooden plank using screws.

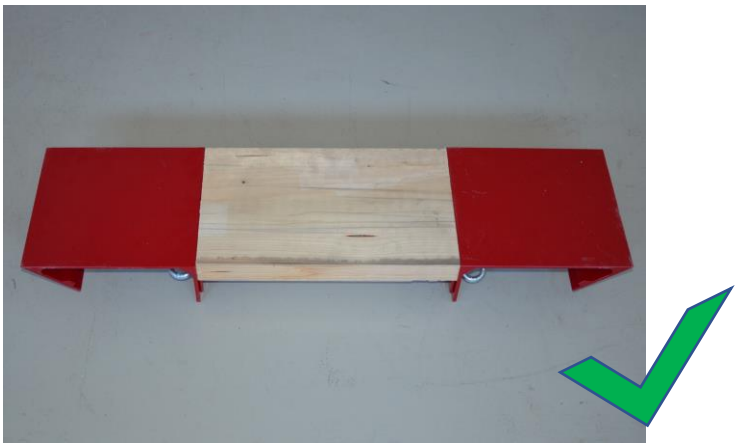
Do not use nails!

9



Vario corner element VE is now ready for use

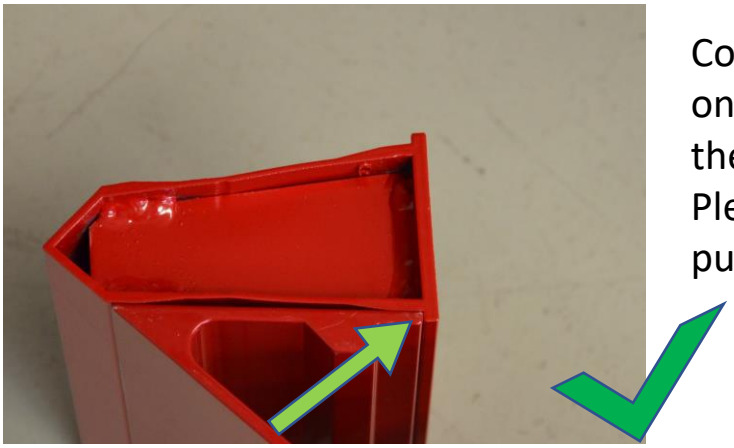
10



11

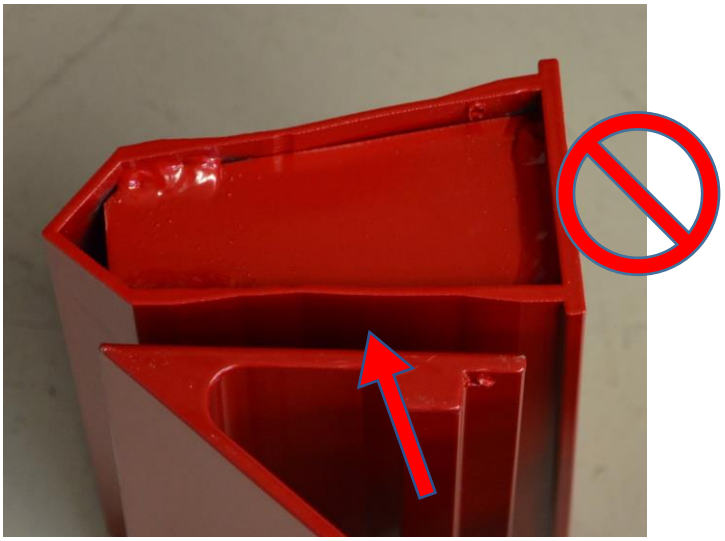
Put all components of the door formwork on the ground

12



Corner wedge SEK is put on one the left diagonal of the formwork element SE. Please make sure that it is put together firmly!

13



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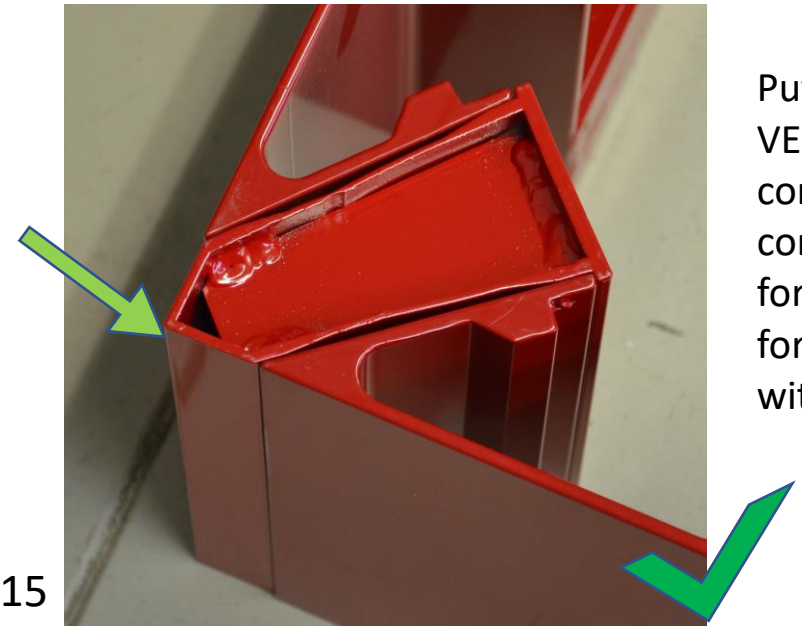
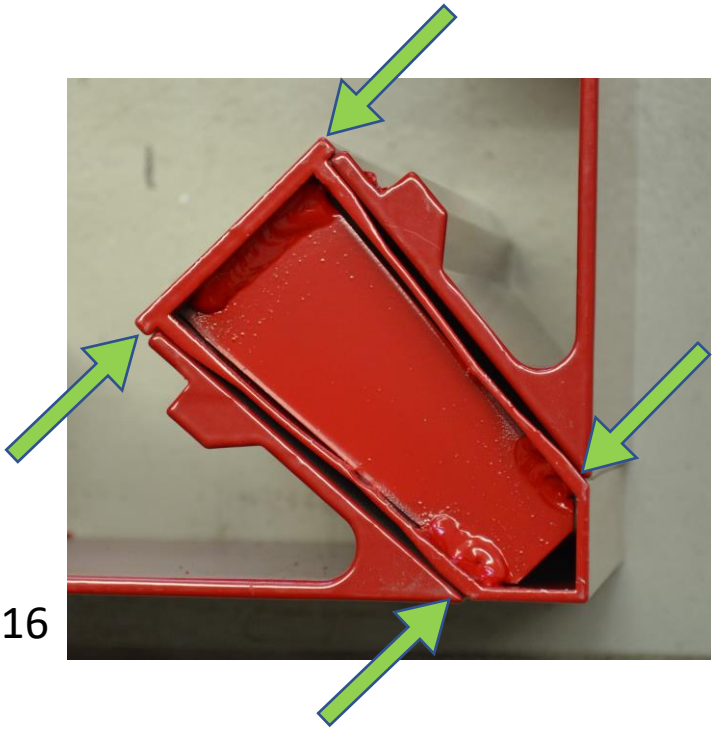


15

Put the vario corner element VE on the other side of the corner wedge SEK. The vario corner element VE and the formwork element SE now form a right angle together with the corner wedge SEK.

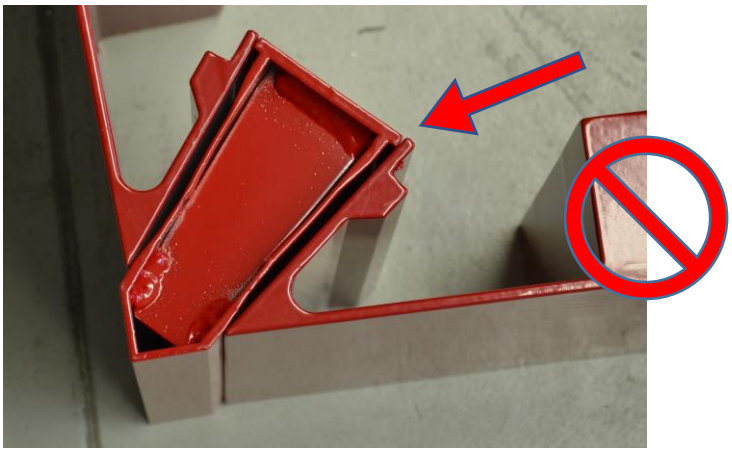


16

Attention: please make sure that the formwork element SE and the vario corner element VE are put firmly together with the corner wedge SEK.

- see arrows-

17



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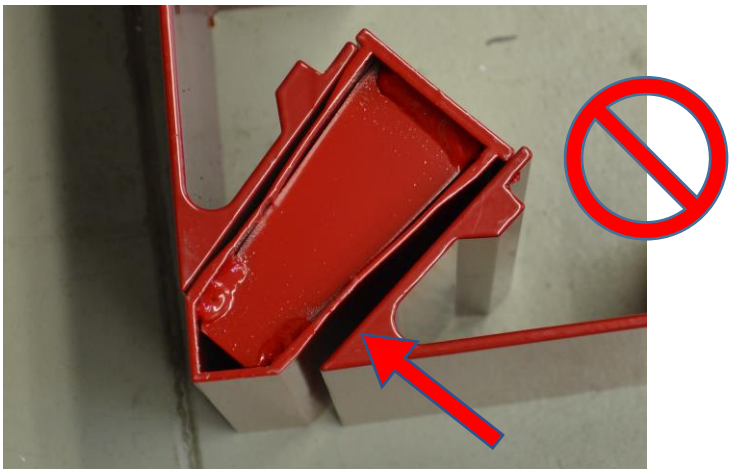

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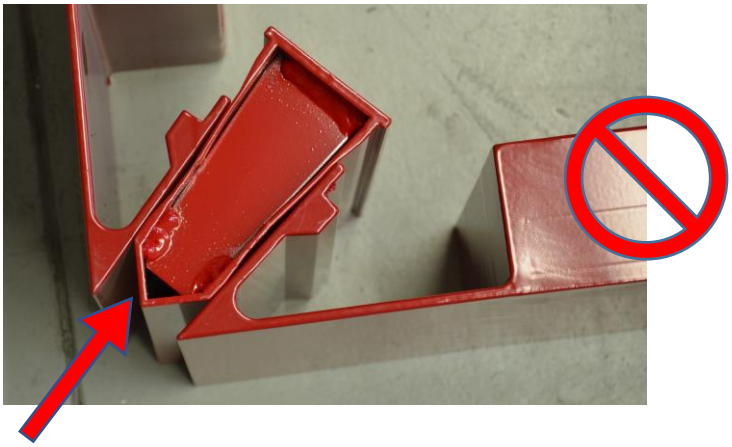

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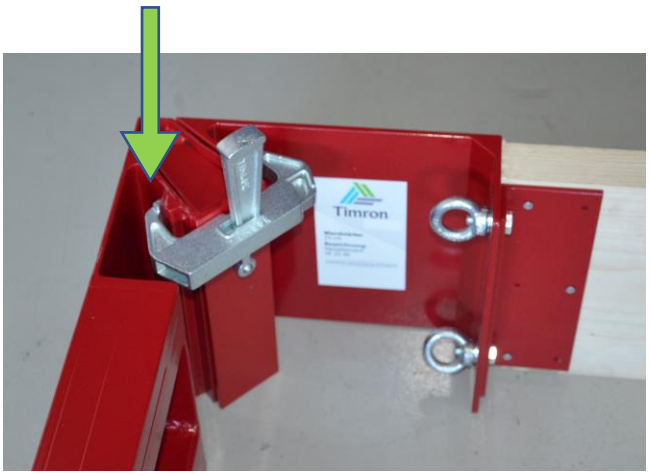
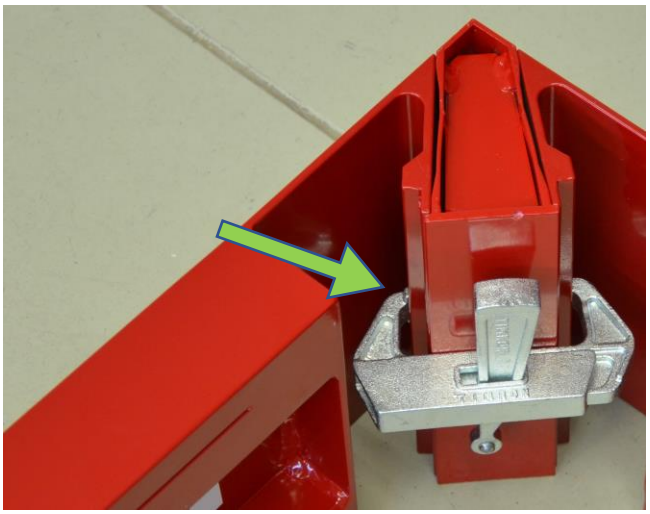


Open the formwork clamp and insert it from the top, so that the claws are enclosing the vario corner element VE, the corner wedge SEK and the formwork element SE.

21



Move the formwork clamp to the middle of the corner wedge SEK.

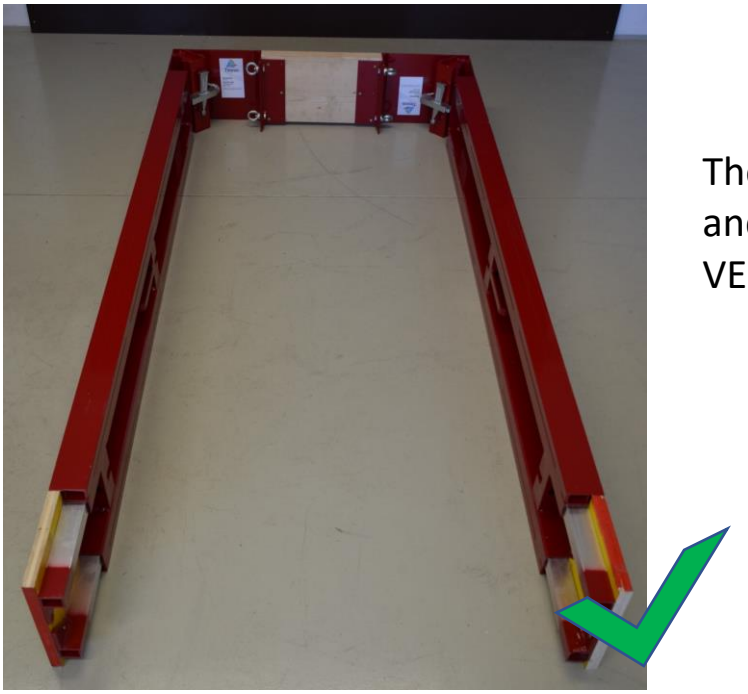
22

Fix and secure the formwork clamp by using a hammer.

23

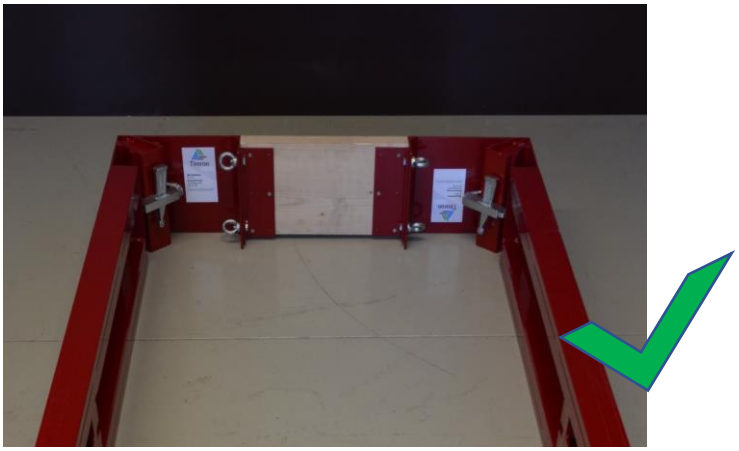
Attention: The wedge of the formwork clamp may not stand out over the corner wedge SEK.

24

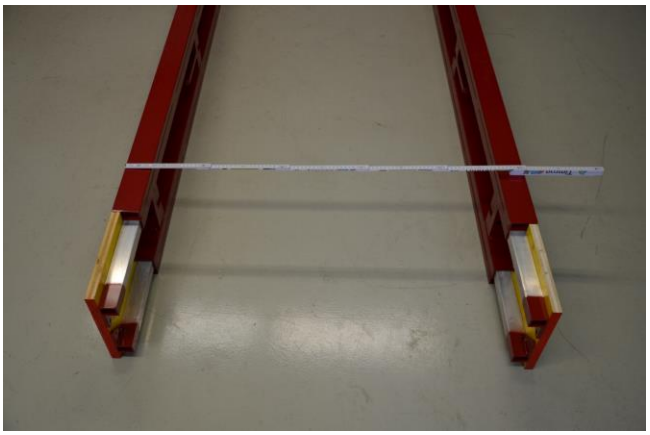


The formwork elements SE and the vario corner element VE are now firmly connected.

25



26



Measure the distance between the formwork elements SE and adjust it to the door width.

27

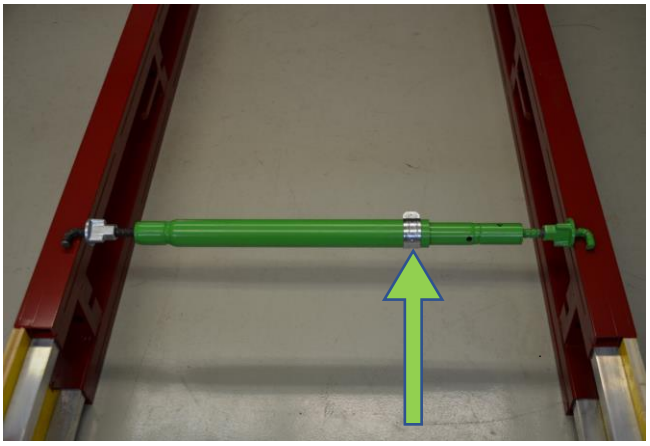
Take the first multi strut MS and put it on the bottom side of the formwork.

Attention: always insert the multi strut MS on the bottom side at first.

28

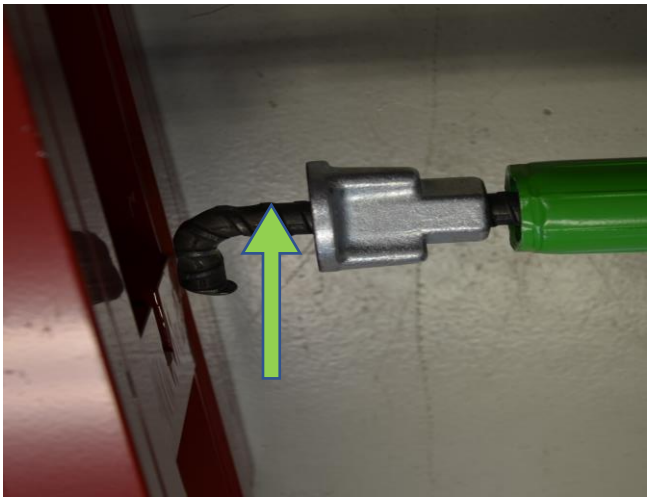
Loosen the safety splint and then…

29



… roughly adjust the multi strut MS to the corresponding door width.

30



Use the DYWIDAG thread on the left side of the multi strut MS to make the fine adjustment.

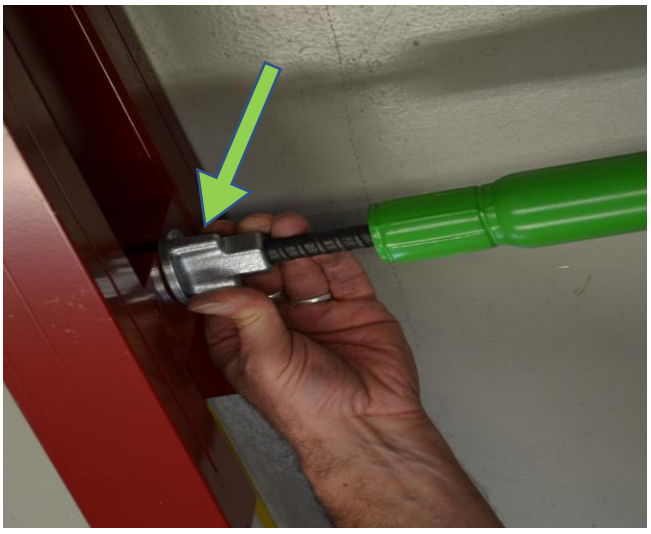
31

Insert the multi strut MS in the strut coupler KP on the right of the formwork and tighten the flanged wing nut.

32

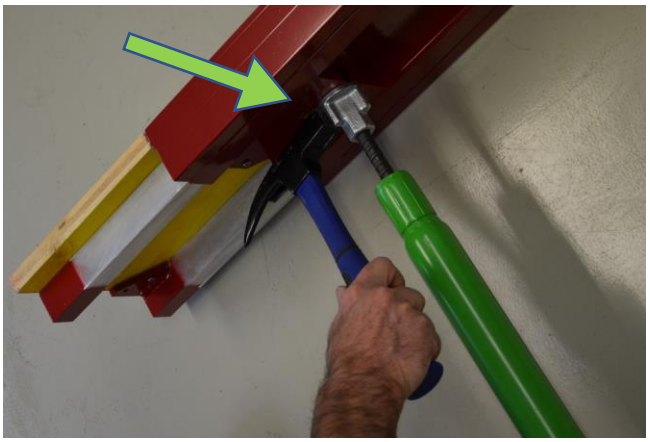
Then insert the multi strut MS in the strut coupler KP on the left of the formwork.

33



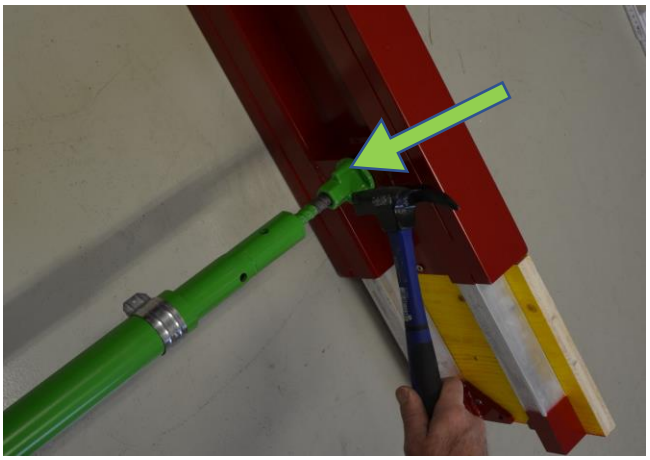
Tighten the flanged wing nut.

34



Use a hammer to firmly tighten the flanged wing nut on the left.

35



Use a hammer to firmly tighten the flanged wing nut on the right.

36

The multi strut MS is now inserted and adjusted correctly.

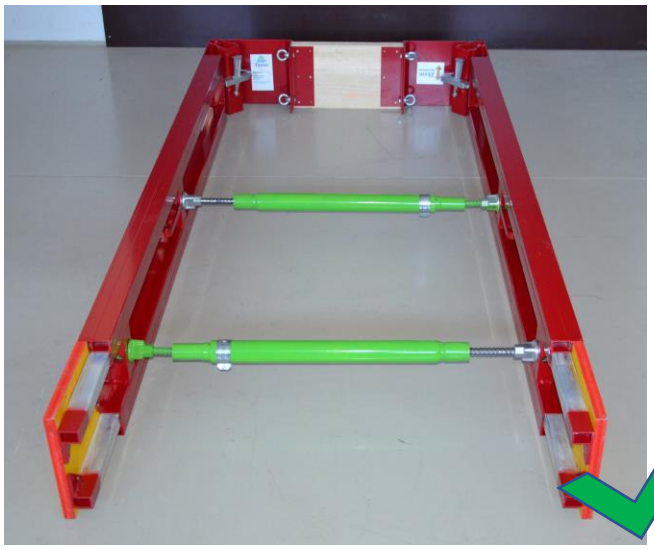
37

Take measurements and adjust the multi strut MS to the corresponding door width by turining.
Important: Check the door width !

38

Insert the second multi strut MS in the middle of the formwork the same way as described before.
Important: Check the door width!

39



The door formwork is now ready to be mounted on the panel formwork.
Important: Use release agent!

40

Put the door formwork in front of the panel formwork and then put it up against the panel formwork.

Attention: When putting up the door formwork against the panel formwork please pay attention to the spigot on the wedge of the formwork clamp. It needs to be directed to the closing formwork!

41

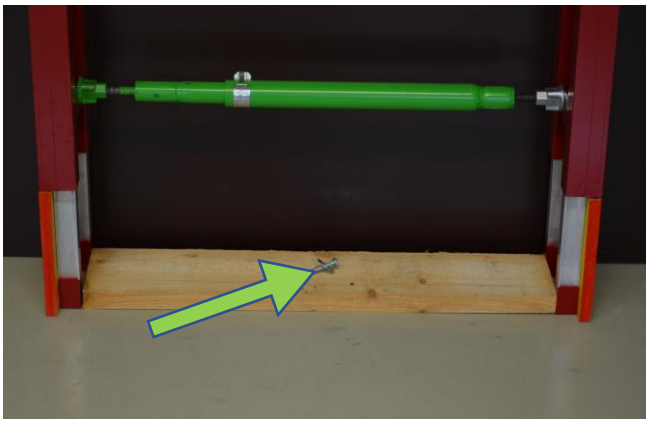
Use four screws in order to mount the securing aid on the door formwork and the panel formwork and thereby secure it from falling.

Do not use nails!
You only may use nails if the panel formwork needs to be dismantled at first.

42

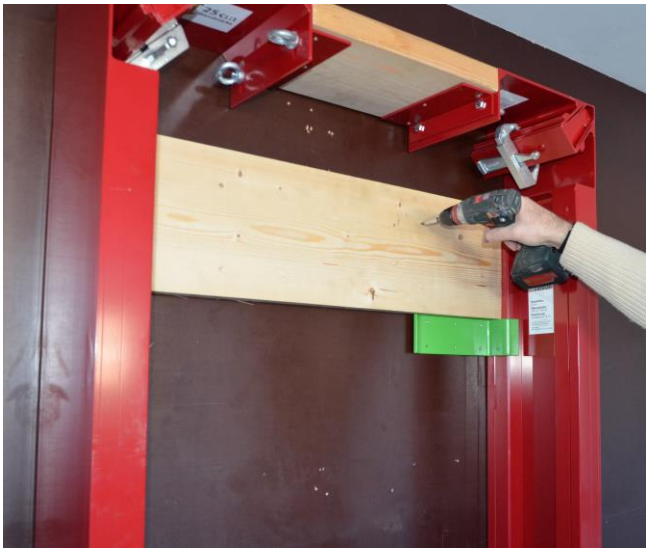
The door formwork needs to be plumb.

43



Use a screw anchor to mount a wooden panel at the bottom line of the door formwork in order to secure it from moving.

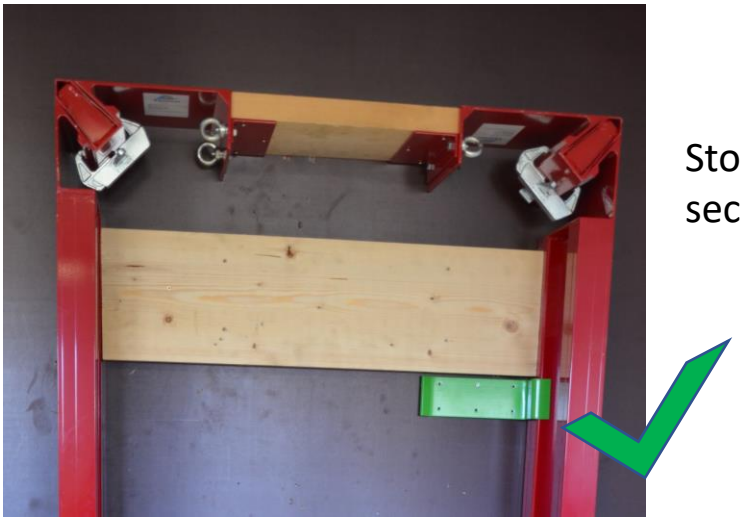
44



Use screws to mount a stop fillet underneath the securing aid to secure the door formwork from shifting.

Do not use nails!
You only may use nails if the panel formwork needs to be dismantled at first.

45



Stop filled is mounted securely!

46

To support the multi element ME you need to use a prop or a multi strut MS. For a wall thickness of 20 cm you are only able to use a multi strut MS due to lack of space.

The door formwork is now ready for use and the concreting process can start after mounting the closing formwork.

Attention: If the height of the concrete is higher or the concrete pouring rate is faster than indicated, please look at page 34!

Dismantling of the door formwork

Remove the components of the door formwork in the following order:

1. prop
2. bottom wooden plank
3. multi struts MS
4. stop fillet
5. securing aid

47

48

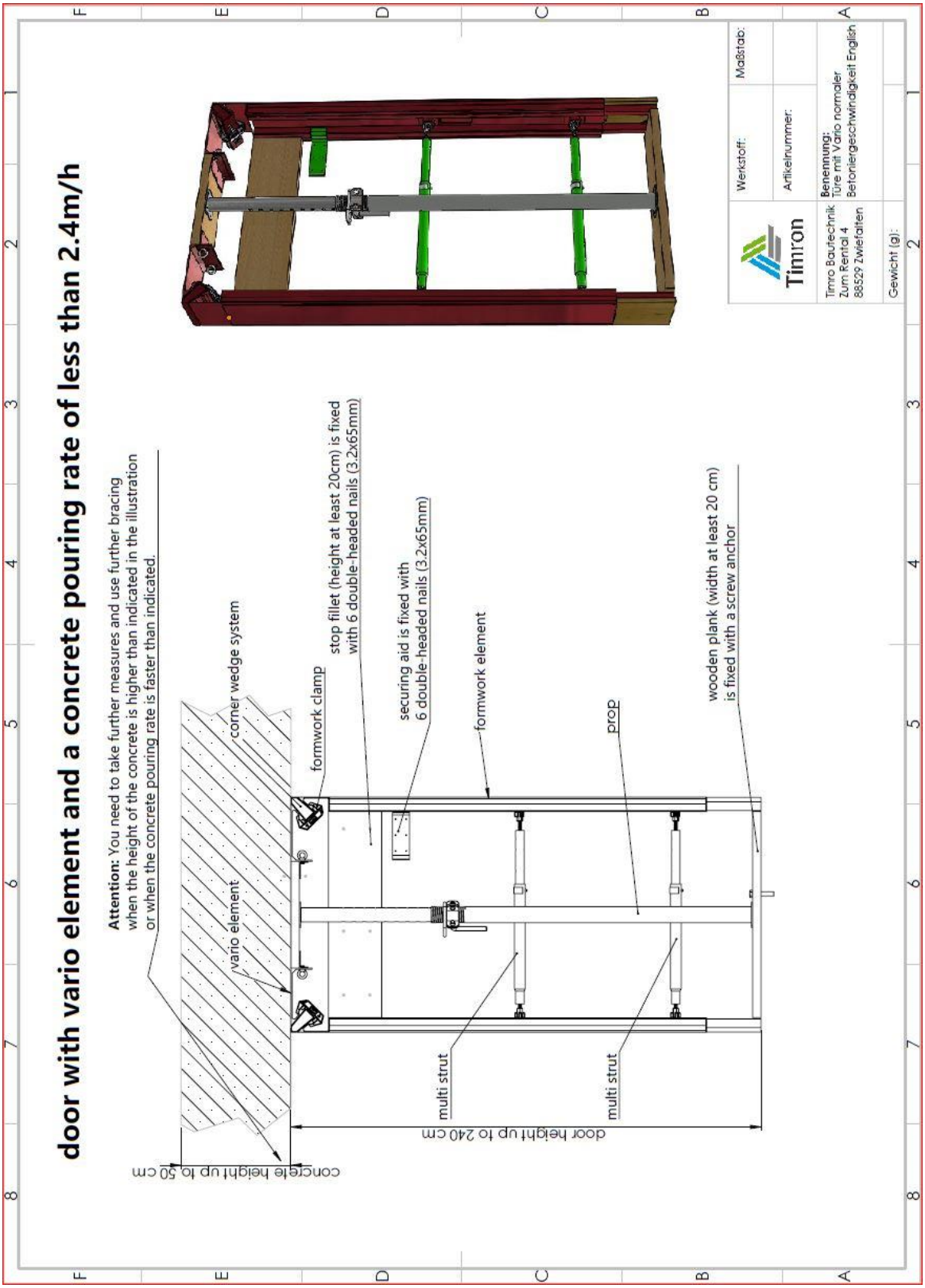
Use a hammer to open the formwork clamp and remove it.

49

Loosen the corner wedge SEK by a slight hammer blow on the edge.

50

Remove the corner wedge SEK and repeat the process described above for the left side of the formwork. Then remove the multielement ME and the formwork elements SE.


door with vario element and a concrete pouring rate of less than 2.4m/h
Attention: You need to take further measures and use further bracing when the height of the concrete is higher than indicated in the illustration or when the concrete pouring rate is faster than indicated.
concrete height up to 50 cm
vario element
corner wedge system
formwork clamp
stop fillet (height at least 20cm) is fixed with 6 double-headed nails (3.2x65mm)
securing aid is fixed with 6 double-headed nails (3.2x65mm)
formwork element
prop
wooden plank (width at least 20 cm) is fixed with a screw anchor
multi strut
multi strut
door height up to 240 cm
Timron
Timro Bautechnik
Zum Rental 4
88529 Zwiefalten
Werkstoff:
Artikelnummer:
Maßstab:
Benennung:
Türe mit Vario normaler Betoniergeschwindigkeit English
Gewicht (g):

TIMRON Bautechnik
Zum Rental 4
88529 Zwiefalten-Sonderbuch
Germany

Telephone : 0049 7373 / 9212647
Fax: 00497373 / 9212648
E-mail: info@timron.de
Web: www.timron.de

Production:
Gürst 36
88529 Zwiefalten-Gürst
Germany