

# Folding Scaffold

Protective and working scaffold

Instructions for assembly and use



July 2008, english  
Keep for later use!

**HÜNNEBECK** 

A BRAND COMPANY

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## 2.0 Product features

The Hünnebeck folding scaffold is collapsible and ready for use immediately on the building site, 1.80 m wide formwork units, which can be employed as working and protective formwork in accordance with EN12810/11. The system comprises sections in the lengths of 3.0 m and 4.5 m, as well as the corner folding scaffold for the standard corner formation.

In addition there is an extensive range of accessories, for example KG Lower platforms, strut and railing extensions available.


The folding scaffold consists of collapsible sections, their integrated bracings and suspensions as well as the facing with side protection. The scaffold cover is composed of 5 cm thick, edge-protected planks. Posts and side protection bars are manufactured from square tubing, supplemented by a toe board.

All steel parts are galvanised and the wood is specially treated in accordance with DIN 68800. This guarantees both a long service life and a high standard of safety.

### 2.1 General information

In this erection and applicational manual you will find essential information concerning the erection and application of the folding scaffold from **Hünnebeck**, together with the precautionary measures that are necessary for safe installation and application. These instructions are intended for the effective work with the folding scaffold. Please read the manual carefully prior to erection and use of the folding scaffold and keep it handy as reference material.

#### **Warning/Caution!:**

Cautionary notes and warnings are identified in this erection and usage instruction as . Non-observance with these notes may lead to severe injuries and/or damages!

#### Legend:

##### **Warning/Caution!:**

refers to erection steps, which must be followed very carefully, otherwise the proper installation of the folding scaffold cannot be ensured.

Non-observance may lead to severe injuries and/or damages. These warnings and notes require absolute attention in order to ensure the desired safety provided by the folding scaffold.

##### **Inspection:**

refers to erection steps which require specific attention by either visual inspection or other means described in more detail.

### 2.2 Safety Instructions

The following erection and use instructions contain information regarding the handling, installation and use of the products mentioned or depicted in it.

The illustrations shown in these standard erection and use instructions shall be considered as samples only on how to use „the folding scaffold“ safely. Add-ons, deviations or changes to specific items always require additional installation instructions by the user, which must be provided based upon the assessment of the risk and, if necessary, requires additional structural analysis.

The currently available occupational health and safety regulations always apply to the safety-related use of our products.

The assembly must always be carried out when the fall protection is still effective. In other cases suitable safety measures in compliance with § 5 ArbSchG (Occupational Safety Directives) must be undertaken by the user.

Only undamaged original parts from the company **Hünnebeck** may be used. For this very reason, all components must be visually inspected for their origin and for possible damage prior to any installation. If necessary, those parts must be replaced with original components.

When requiring spare parts, only original **Hünnebeck** parts may be used.

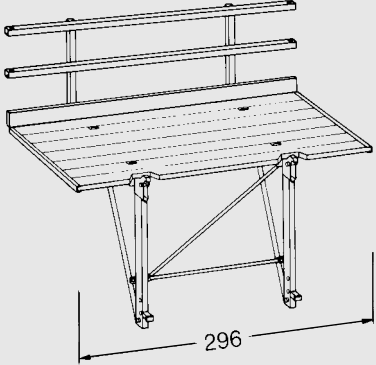
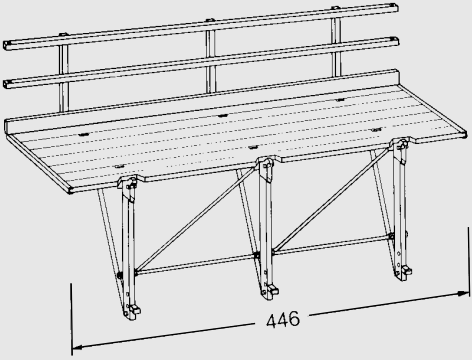
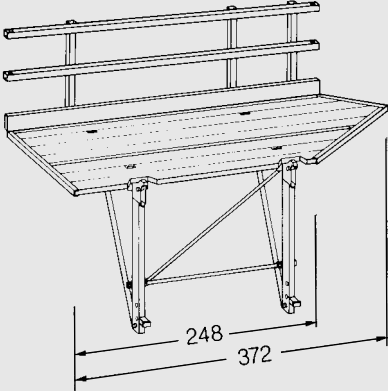
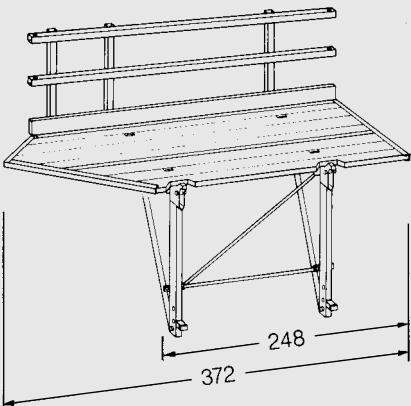
Mixing our systems with those from other manufacturers are inherently dangerous and require a separate inspection.

The illustrations in this "erection and application manual" are used to emphasise the recognition of details and therefore, may not always be complete from a safety point of view.


Based on the engineering development, we reserve the right to change any design without prior notice.

The latest issue of the erection and application instructions may be downloaded from the internet, go to [www.huennebeck.de](http://www.huennebeck.de) or they can be ordered from **Hünnebeck** directly.

# 3.0 Components

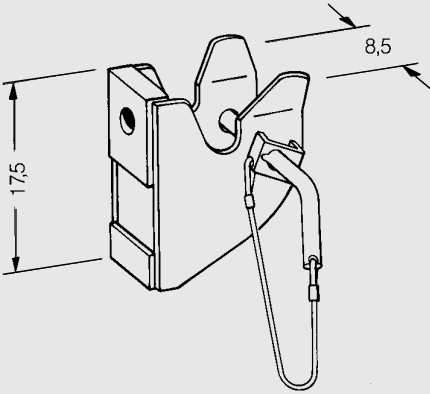
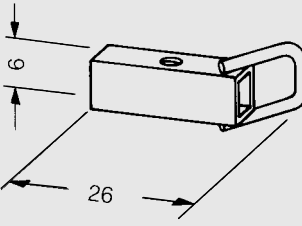
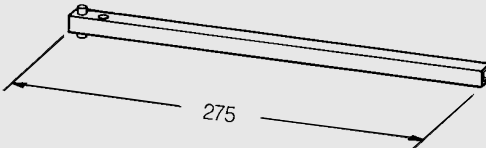
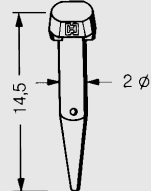

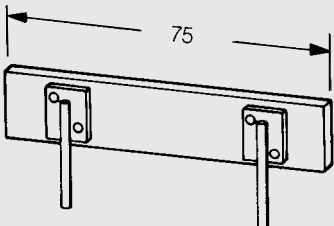
	Description	Item No.	Weight kg/unit
<p><b>Basic elements</b></p> 	<p><b>Folding scaffold 300</b>            Completely assembled scaffold units consisting of 2 collapsible brackets, their bracings, the impregnated and edge-protected board platform, as well as the guardrails made of square tubing with a wooden toe board.            The guardrail is lockable at two points and can be collapsed for transport purposes. The <b>folding scaffold</b> is equipped with lowable crane stirrups.</p>	490 005	283.30
	<p><b>Folding scaffold 450</b>            as described above, but with 3 brackets.</p>	490 016	419.10
	<p><b>Corner folding scaffold R (= Right)</b>            Pre-assembled scaffolding unit as described above, equipped with 2 brackets and an extended and reinforced punch guide on one side.            The <b>Corner folding scaffold R</b> together with the <b>Corner folding scaffold L</b> forms the system solution for corners maintaining the entire width of the platform even in corner areas due to the shapes of these projecting parts.            At the same time 5 meters of wall are scaffolded.</p>	533 745	346.00
	<p><b>Corner folding scaffold L (= Left)</b>            as described above.</p>	533 756	346.00

**Important note!**

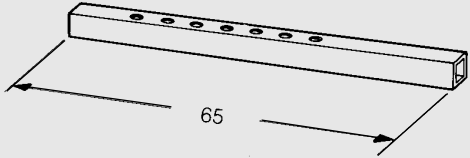
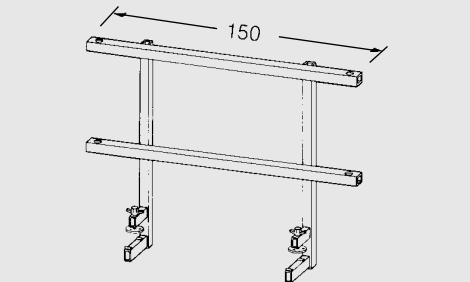
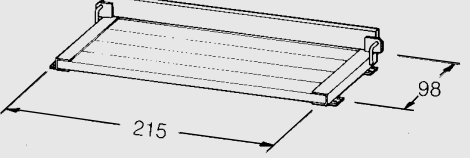
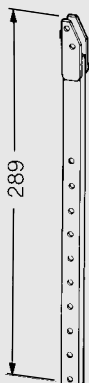
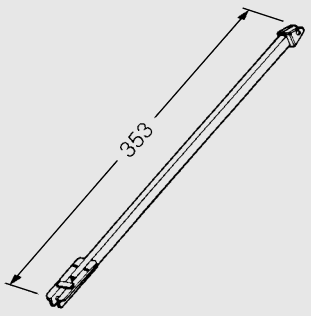


**Corner folding scaffold R + L** for the corner solution provide only in pairs.  
 The **Corner folding scaffold** can also be used on wall areas. (See Page 11).

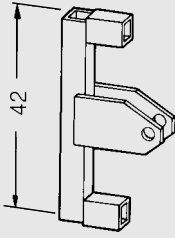
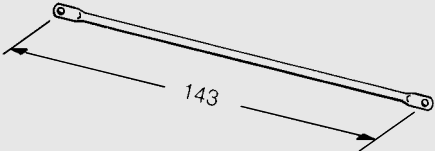
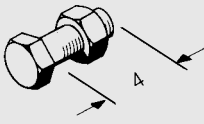
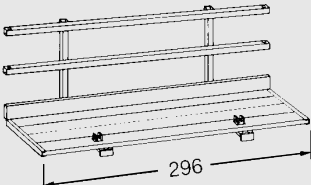
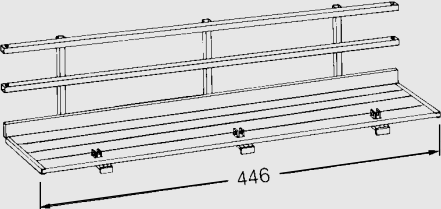
# Folding Scaffold

Description	Item No.	Weight kg/unit
	463 010	3.60
<p><b>Bracket bearing</b> is anchored to the building and serves as a suspension for the brackets of the <b>folding scaffold</b>. Unintentional unhinging is eliminated by the securing with the safety bolt.</p>		
	498 229	1.60
<p><b>KG Corner connection</b> In the corner region this part is pushed onto the guardrail tubing of the scaffold and secured with respectively one <b>Waler bolt D20 + spring pin</b>. The <b>KG Corner rail</b> of the scaffold are guided through the hooks of the <b>KG Corner connections</b> (4 pcs. per corner).</p>		
	498 230	9.10
<p><b>KG Corner rail</b> The gap in the corner region is closed with <b>KG corner rails</b> which are pushed into place (2 for each corner, wall and knee rail). The <b>KG Corner rail</b> is secured against falling out of place by a <b>Waler bolt D20 + spring pin</b>.</p>   	420 000	0.30
<p><b>Waler bolt D20</b></p>	173 776	0.01
<p><b>Spring pin</b> secures the coupling of the <b>KG Corner connection</b>, the <b>KG Corner rail</b> and the <b>KG Rail extension</b>.</p>	534 202	3.50
<p><b>KG Corner toe board</b> closes the toe board gap on the <b>Corner folding scaffold R + L</b>. It is simply inserted into the retaining holes of the cover.</p>		

## 3.0 Components

	Description	Item No.	Weight kg/unit
<p data-bbox="135 224 542 257"><b>Supplementary equipment</b></p>     	<p data-bbox="619 291 829 324"><b>KG Rail extension</b></p> <p data-bbox="619 331 1133 616">The guardrail compensations in the region of the wall are shored by the <b>KG Rail extensions</b>. Unilaterally pushed into place on the guardrail tubing of the adjacent scaffolding units and secured with respectively one <b>Waler bolt D20 + spring pin</b> in the perforated strip. Adjustment up to 50 cm = 2 pcs. Adjustment between 50 and 100 cm = 4 pcs.</p> <p data-bbox="619 694 845 728"><b>KG Rail transversal</b></p> <p data-bbox="619 734 1149 907">An entire guardrail unit that is clamped to the edge of the planking of the scaffolding unit, e.g. as a <b>KG Rail transversal</b> at the ends of scaffolds, which are not equipped with surrounding platforms.</p> <p data-bbox="619 963 821 996"><b>KG Corner plank</b></p> <p data-bbox="619 1003 1141 1176">Bridges the platform planking if scaffold corner units are not employed, but the <b>Folding scaffolds 300 + 450</b> are being used. The planking is equipped with toe board, edge protection, crane hoops and fixing plates for securing purposes.</p> <p data-bbox="619 1265 845 1299"><b>KG Suspension bar</b></p> <p data-bbox="619 1305 1133 1512">The vertical section of the brackets in the <b>Folding scaffold</b> is extended with the <b>KG Suspension bar</b>. It is connected with respectively 2 <b>bolts 105 + spring pin</b> and is able to support both the <b>KG Bearer bar</b> and <b>KG bearer</b>, but also the <b>KG Lower platform</b>.</p> <p data-bbox="619 1736 790 1769"><b>KG Bearer bar</b></p> <p data-bbox="619 1776 1141 1982">With the use of the <b>KG Bearer bar</b> in connection with the <b>KG Suspension bar</b> a lower supporting point on the building can be located for the <b>folding scaffold</b> (e.g. in the case of open facades). Two must be provided for each <b>KG Bearer bar</b>.</p>	<p data-bbox="1181 291 1276 324">498 218</p> <p data-bbox="1181 694 1276 728">498 115</p> <p data-bbox="1181 963 1276 996">498 446</p> <p data-bbox="1181 1265 1276 1299">526 330</p> <p data-bbox="1181 1736 1276 1769">530 259</p>	<p data-bbox="1396 291 1452 324">3.60</p> <p data-bbox="1396 694 1468 728">23.70</p> <p data-bbox="1396 963 1468 996">69,40</p> <p data-bbox="1396 1265 1468 1299">26.00</p> <p data-bbox="1396 1736 1468 1769">23.30</p>

# Folding Scaffold

Description	Item No.	Weight kg/unit
	530 215	5.70
	490 200	2.40
	001 300	0.20
	526 569	157.60
	526 570	238,20

**KG Bearer**

Using one **Bolt 105 + spring pin** the **KG Bearer** can be fixed in the perforated strip of the **KG Suspension bar** at the required height for the supporting point.

**Folding scaffold horizontal**

As a horizontal bracing this tube is mounted at the lower connection point of the **KG Bearer bar** with respectively 2 **Bolts M 20 x 40 + nut 4.6**.

**Bolt M 20 x 40 + nut 4.6**

Fixes the **Folding scaffold horizontal** with the **KG Bearer bar**.

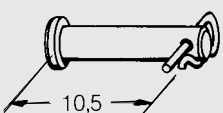
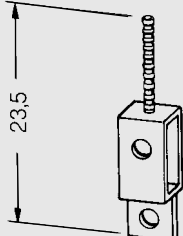
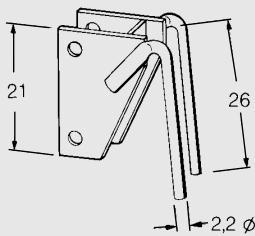
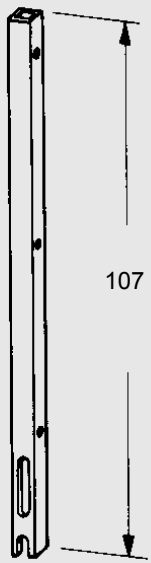
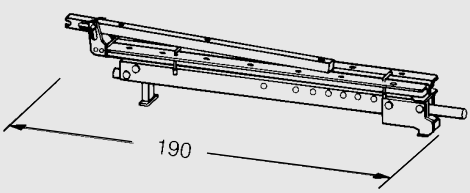
**KG Lower platform 300**

By means of the **KG Lower platform** the **folding scaffold** is furnished with a supplementary working level. Reworking on the facade can be performed from this platform. The board platform and railings are executed as per the **folding scaffold**. The platform bearers located axis of the brackets enable the coupling to the **KG Suspension bar** with 4 **bolts 105 + spring pin** in the **KG Lower platform 300** (6 **bolts 105 + spring pin** in the **KG Lower platform 450**).

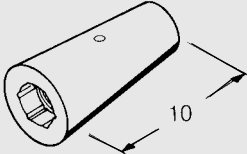
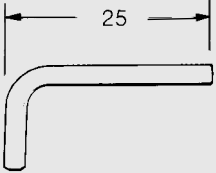
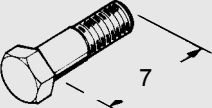
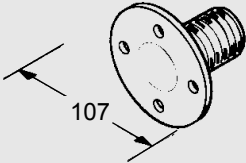
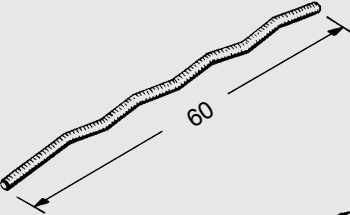
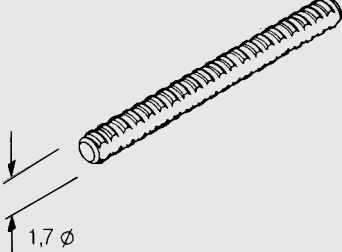
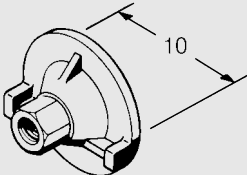
**KG Lower platform 450**

See above.

## 3.0 Components

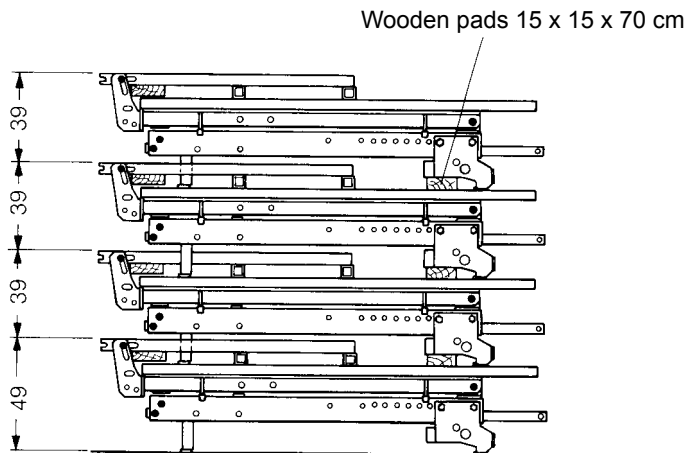
	Description	Item No.	Weight kg/unit
	<p><b>Bolt 105 + spring pin</b> Connector for <b>KG Suspension bar</b>, <b>KG bearer</b> and <b>KG Lower platform</b>.</p>	154 127	0.29
	<p><b>KG Connector</b> enables the connection of a formwork diagonal strut as well as a wind tension strip. It is secured in the platform of the folding scaffold with a <b>Waler bolt D20 + spring pin</b>.</p>	536 109	0.78
	<p><b>KG Hook</b> replaces the installed suspension when the anchoring of the formwork is to be accomplished through reinforcement loops.</p>	526 190	5.60
	<p><b>KG Single post</b> Whenever special lengths in the railing are required the <b>KG Single post</b> is equipped with board rails on site.</p>	490 678	5.10
	<p><b>KG Single bracket</b> employed for the production of <b>folding scaffolds</b> in special lengths. The planking* and the rail planking* are created and mounted on site.</p> <p>* Dimensioning of the timber parts in compliance with static requirements.</p>	529 573	59.60



	Description	Item No.	Weight kg/unit
<p><b>Anchoring parts</b></p>       	<p><b>Tie cone M 24/D+W</b>            The <b>Tie cone M 24/D+W</b> is equipped with a M24 thread at the front for the mounting of the bracket bearing. The lost rear anchor parts are retained at the rear in the D+W screw thread. The cone is removed from the concrete using a <b>Turnscrew w.a.f. 24</b>.</p>	496 664	0.65
	<p><b>Turnscrew w.a.f. 24</b>            to remove the cones from the concrete.</p>	542 471	1.25
	<p><b>Fit bolt M 24x70 5.6</b>            for the mounting of the bracket bearing to the <b>tie cone M 24/D+W</b> (ratchet with extension and the 24 nut for the mounting process).</p>	185 635	0.47
	<p><b>Nailable disk M24</b>            Fixes the <b>tie cone M 24/D+W</b> to the wall formwork (<b>Turnscrew w.a.f. 12</b> for assembly and installation).</p>	515 947	0.16
	<p><b>Pigtail anchor 60</b>            Lost rear anchor. Is embedded into the concrete with screwed <b>tie cone M 24/D+W</b>.</p>	509 581	1.00
	<p><b>Tie rod DW15 per meter run</b>            Lost rear anchor. Is cut to length on the building site and embedded into the concrete together with the screwed-on tension nut and the cone. Observe the installation instructions!</p>	164 811	1.00
	<p><b>Tension nut</b>            serves as a locking plate (40 kN admissible load).</p>	197 332	0.65

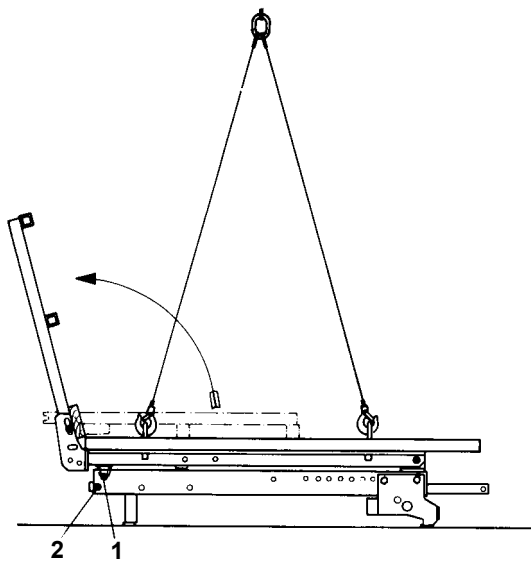
## 4.0 Assembly and dismantling

### Delivery situation

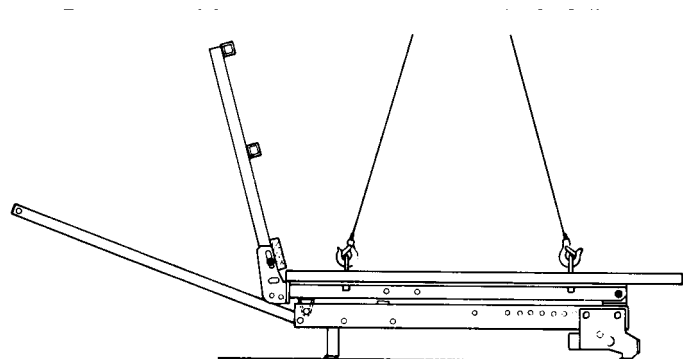


### Erection:

1. Position the railings, elevate and allow them to lock into place as required (straight or inclined).  
Remove the crane loops and connect a four-fold hanger.

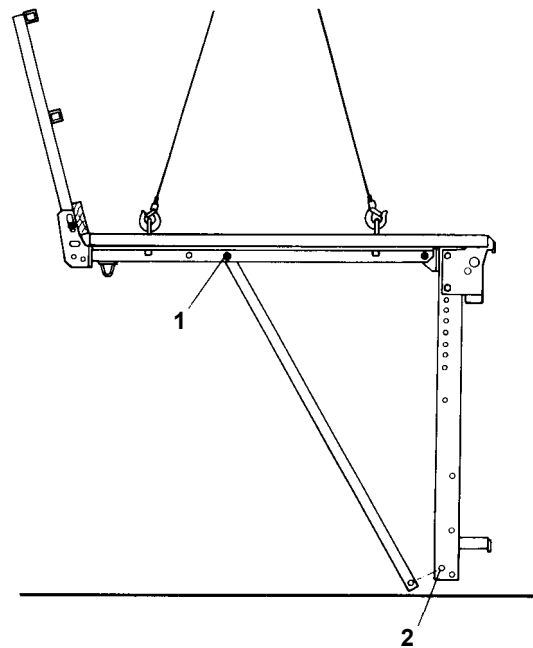


2. Remove the bolts (1) for the shipping lock and the bolts (2) securing the diagonal tubing.  
Then remove the diagonal tube from the vertical strut of the platform of the folding scaffold.



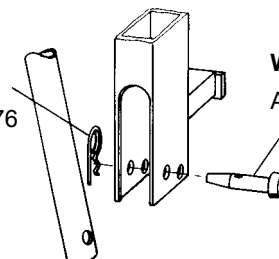
3. Lift the folding scaffold ca. 2 m with the crane and secure the diagonals with the bolts (1 + 2).

The folding scaffold is now ready for use.



### Securing the diagonal tube:

Spring pin 4  
Art. No.: 173 776



Waler bolt D20  
Art. No.: 420 00

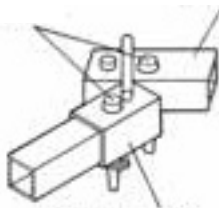
### Dismantling:

The folding scaffold is folded together once again in reverse sequence.

### Corner formation with corner folding scaffolds

Waler bolt D20  
+ spring pin

KG Corner rail



KG Corner connection

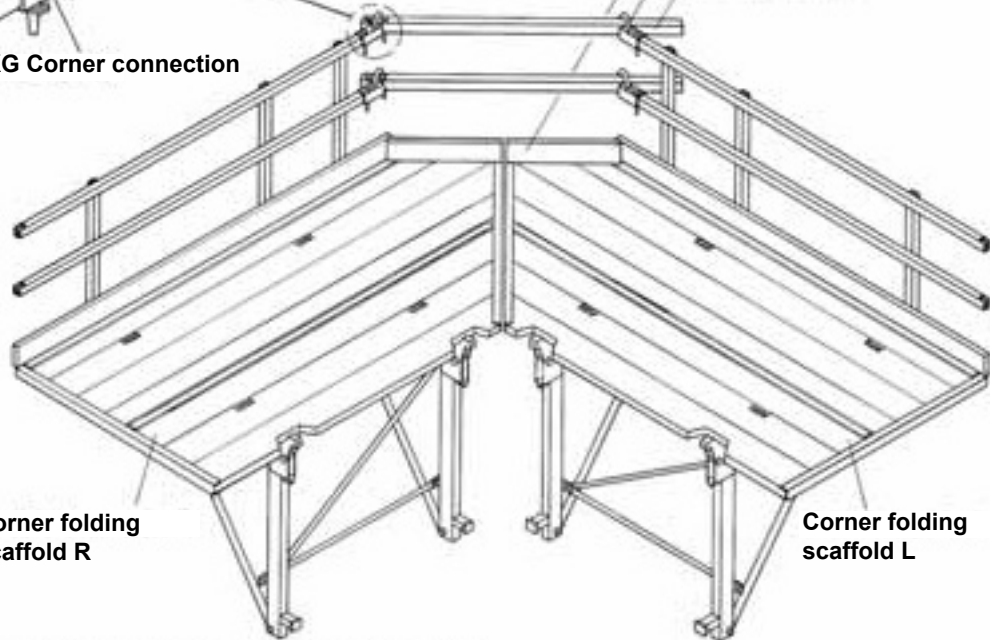
KG Corner toe board

KG Corner connection

KG Corner rail

Corner folding scaffold R

Corner folding scaffold L



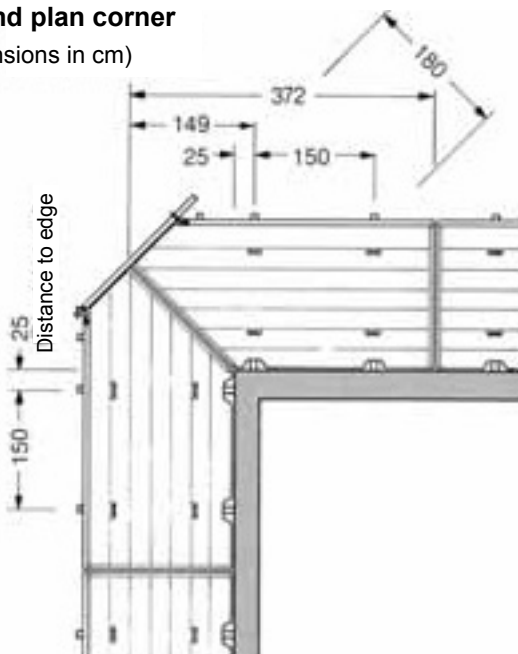
The formation of a corner scaffold is accomplished with the **Corner folding scaffolds R** and **L**, which are always used pairwise.

The entire platform width of 180 cm is maintained by the use of these scaffold units.

The railings are locked by means of the insertion and fixation of the **KG Corner rails** into the hooks of the **KG Corner connection**. Location holes are provided in the planking for the **KG Corner toe board**. The positioning of the railings can be freely selected (vertical or externally inclined).

#### Ground plan corner

(Dimensions in cm)

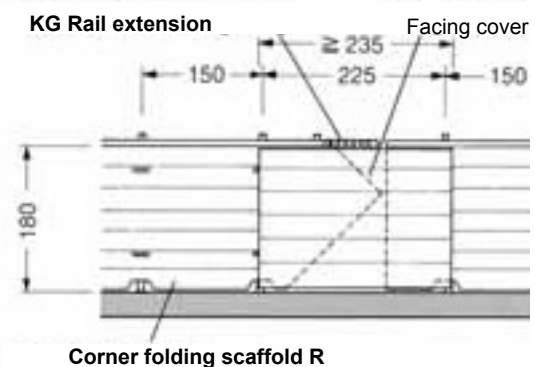


### Use in wall areas

The **Corner folding scaffolds R** and **L** can be employed in wall areas. The gap arising due to the form of the formwork unit is covered with planks, min. 24/4.5 cm. The railings must be locked by **KG Rail extensions** (see page 13).

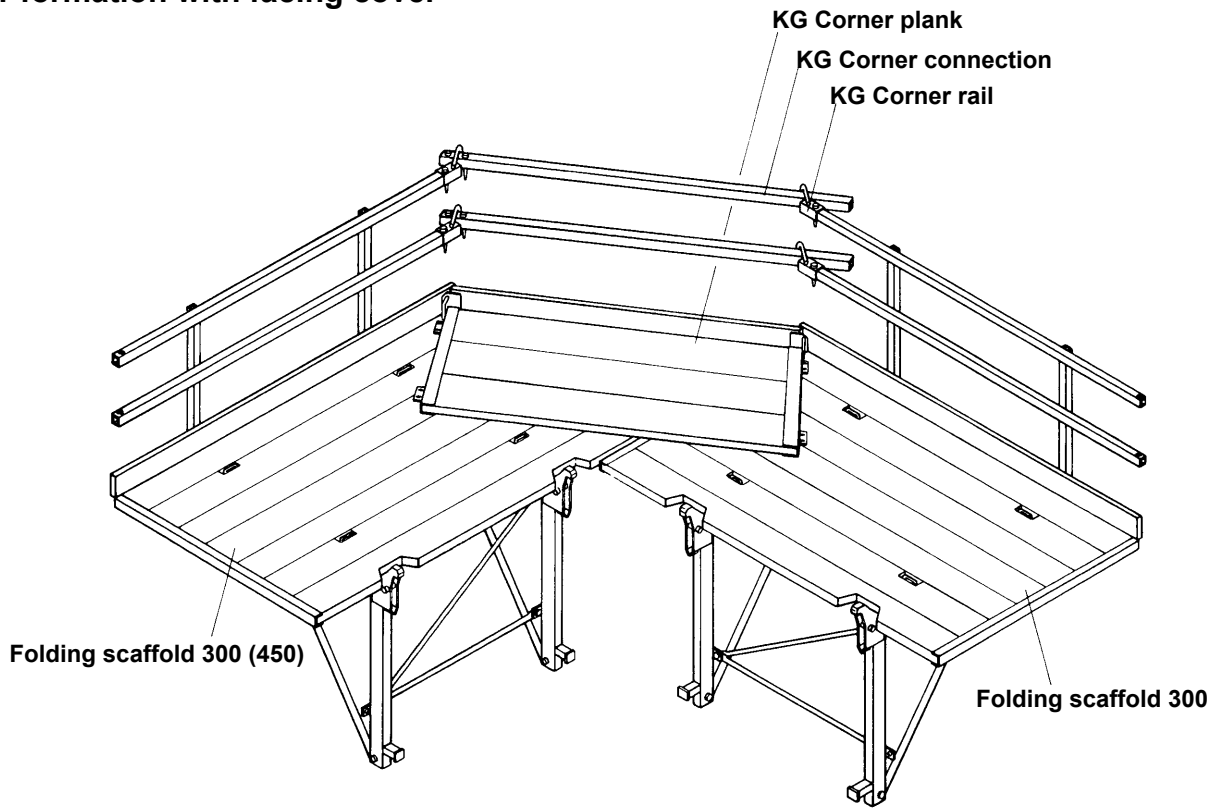
#### Ground plan wall area

(Dimensions in cm)



# 5.0 Corner formation

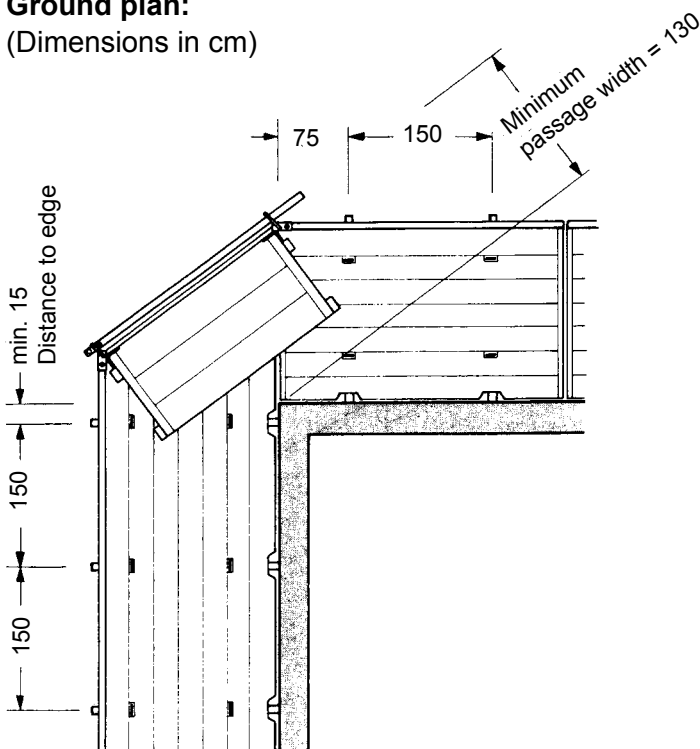
## Corner formation with facing cover



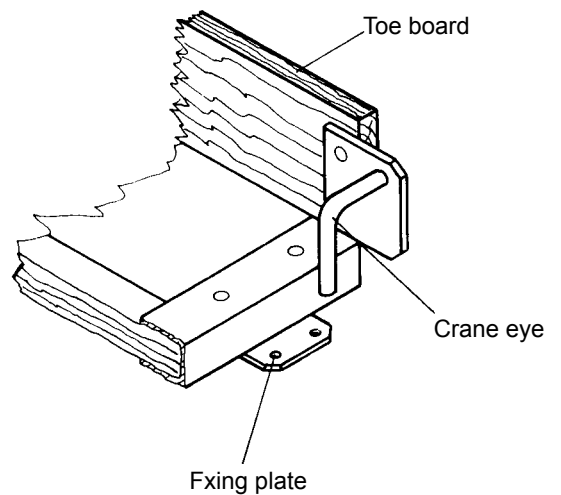
On application within the scaffold groups ranging from 1 to 4 it is possible to execute the corner transition without standard **Corner folding scaffolding**. The gap arising in the corner transition will be covered with the **KG Corner planks**. These are secured against displacement by nails following the positioning

on the **folding scaffold**. In the standard corner design the railing is locked and closed with **KG Corner connections** and **KG Corner rails**. The **KG Toe board** is integrated in the **KG Corner plank**.

**Ground plan:**  
(Dimensions in cm)



**Detail: KG corner plank**

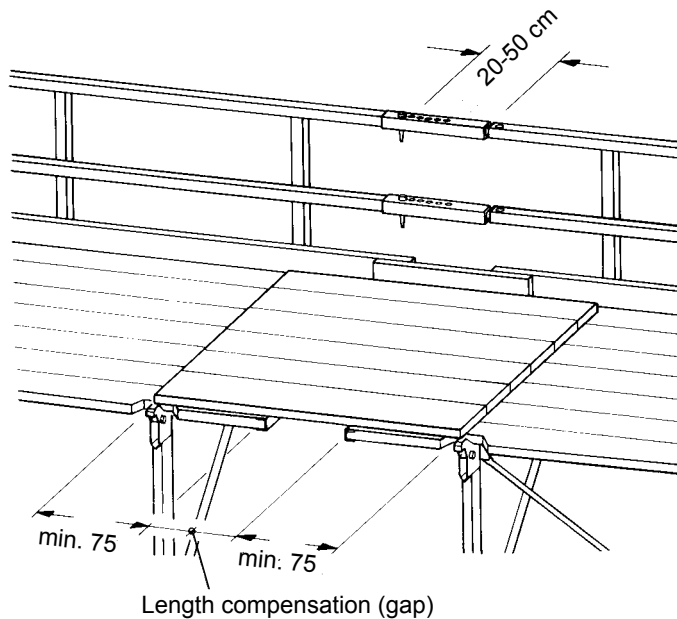



## 6.0 Length compensation

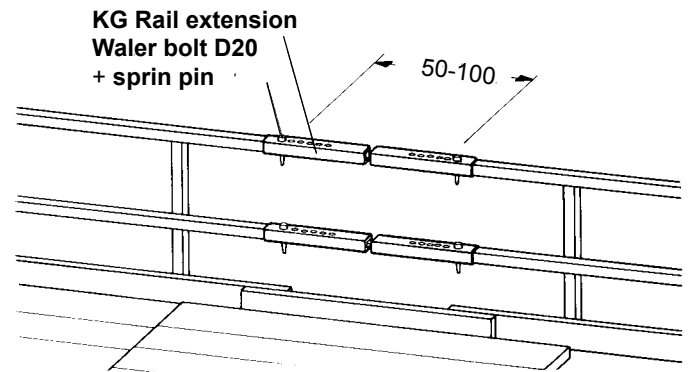
# Folding Scaffold

### Length compensation with facing cover

(Dimensions in cm)



**Important note!**  
 On application as a safety scaffold the guidelines specified on page 17 must be adhered to!



On application of the folding scaffolds gaps could occur during the length adjustment, which must be bridged by a plank. Hence planks with dimensions of at least 24/4.5 cm are necessary (toe board 15/3 cm). The length is calculated from the plank gap + 2 x min. 75 cm bearing length. The planks must be secured against displacement by appropriate measures.

The gap in the railing is closed with the **KG Rail extension**. On one side (on two sides in the case of adjustments from 50 to 100 cm) it is pushed onto the railing posts of the adjacent scaffold units and secured respectively with one **Waler bolt D20 + sprin pin**. Observe the maximum compensation width for the arising load condition!

### KG Rail transversals at the end of the scaffold

The **KG Rail transversal** of the folding scaffold is a guardrail unit 150 cm long, which is clamped to the edge of the plank of the folding scaffold.

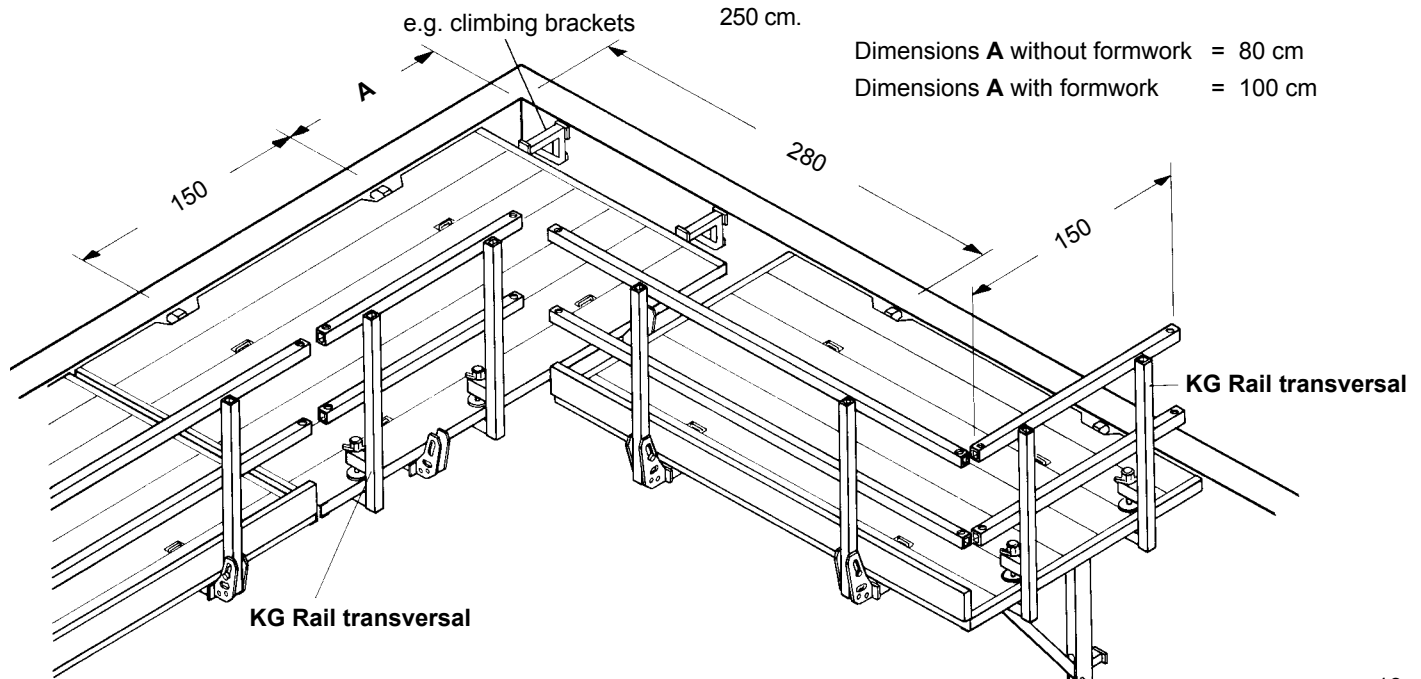
Possible use would be, for example, at the ends of the scaffolding, (when the platform does not surround the building completely) as well as in inside corners of buildings. In this case the standard guardrails are removed and replaced by the

**KG Rail transversal** of the folding scaffold in order to maintain the necessary passageway.

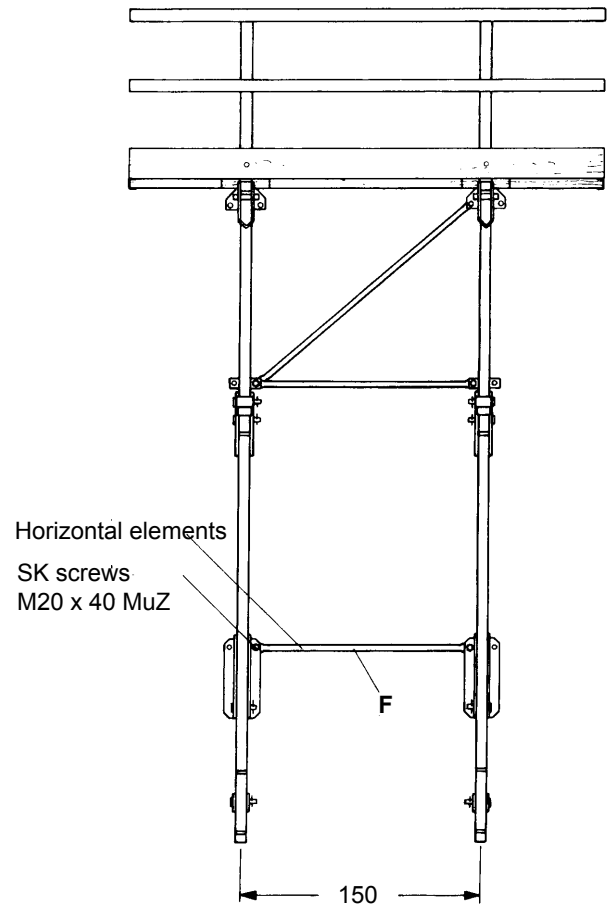
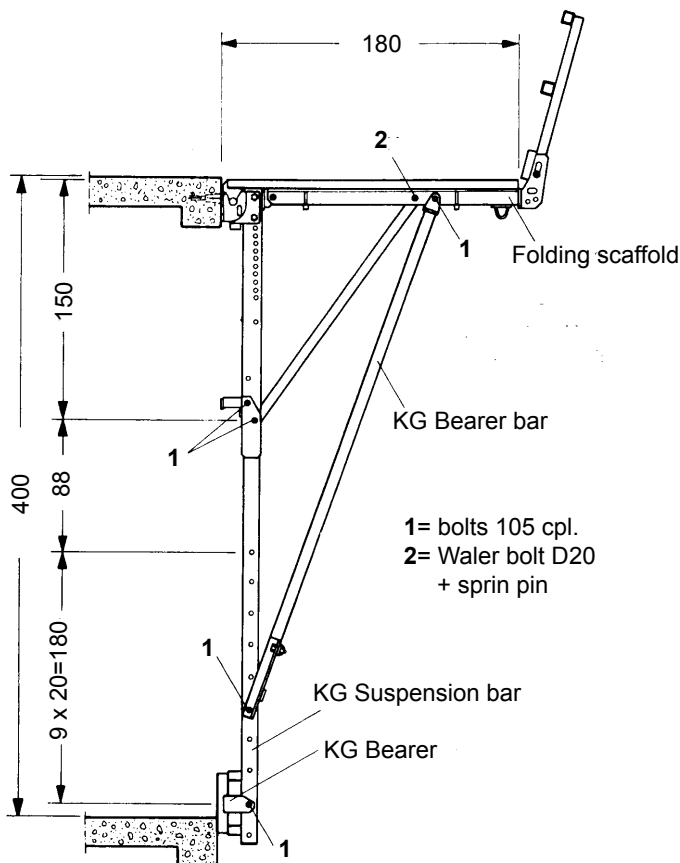
It must be ensured that the scaffolding is not loaded diagonally to the longitudinal axis by the weight of the formwork. Hence in application of the formwork, brackets (e.g. **Climbing brackets 1** Art. No.: 021 692) must be provided.

The length of the **KG Rail transversal** can be extended up to 250 cm.

Dimensions **A** without formwork = 80 cm  
 Dimensions **A** with formwork = 100 cm



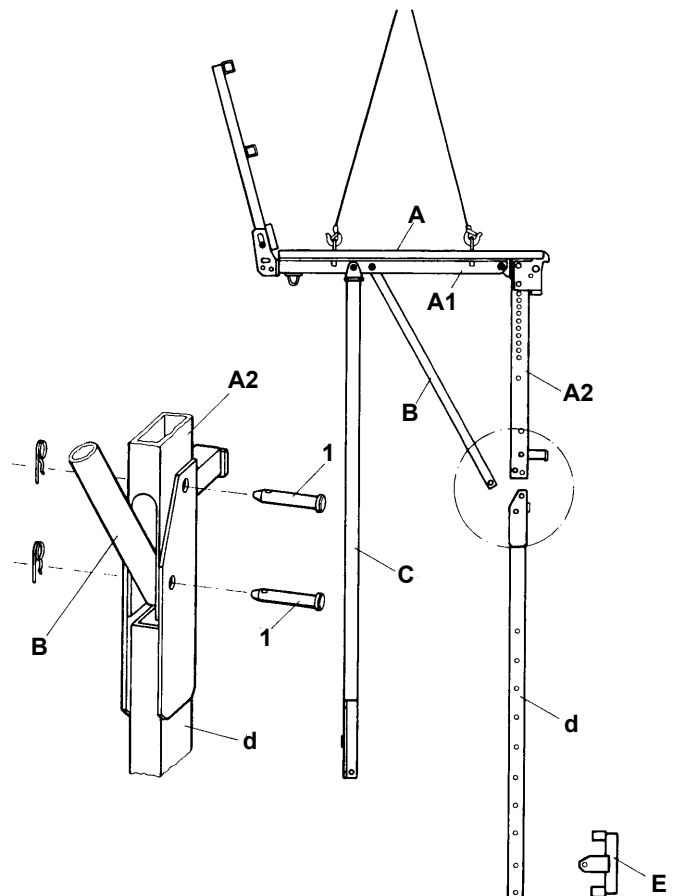
## 7.0 Strut extension



By reason of the application of a strut extension the **folding scaffold** can also be employed on buildings with frame construction or in regions with extensive openings in walls. The bearing point of the scaffold is then variable and can be maximum 400 cm below the scaffold level. In this structural design the **folding scaffold** in scaffold group 3 in accordance with DIN 4420 Part 1 (with or without formwork) can be employed.

### Assembly and mounting sequence:

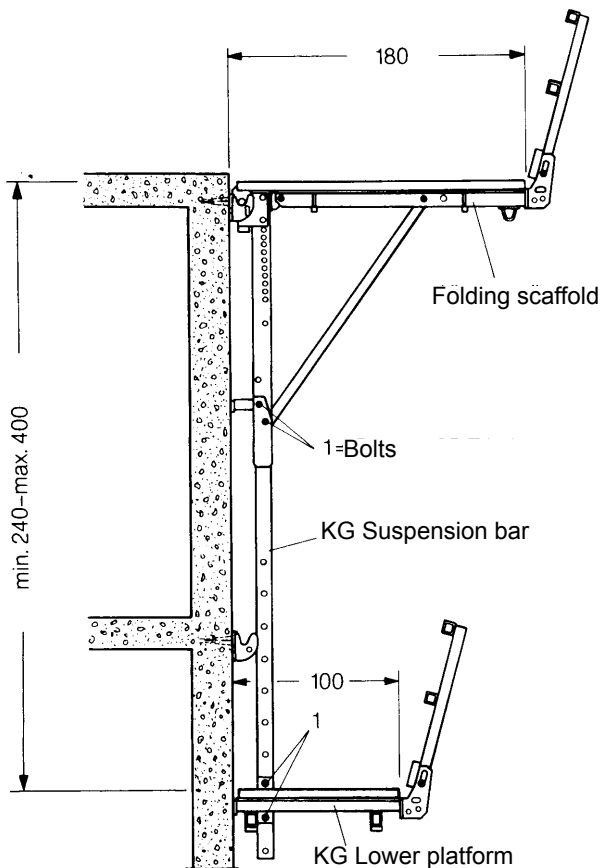
1. Lift the folding scaffold unit **A** with the help of a crane (see Page 10).
2. Mount the diagonal tube **B** and KG Bearer bar **C** to the horizontal bracket bearer **A1** (with respectively one bolt **1** + **2**).
3. Fix the KG Suspension bar **D** to the vertical bracket bearer **A2** using two bolts. The diagonal tube **B** is also held in position by one of these bolts.
4. Now the KG Bearer bar **C** is connected with the KG Suspension bar **D** with one bolt (**1**) and the KG Bearer **E** is brought into the required position.
5. For reinforcement the horizontal **F** is mounted using 2 Bolt M20x40 + nut 4.6.



Strut extension comprising:		Number of pieces for	
Description	Art. No.:	KG 300	KG 450
KG Suspension bar	526 330	2	3
KG Bearer bar	530 259	2	3
KG Bearer	530 215	2	3
Folding scaffold horizontal	490 200	1	2
Bolt 105 + spring pin	154 127	10	15
Bolt M20x40 + nut 4.6	011 300	2	4

## 8.0 KG Lower platform

# Folding Scaffold



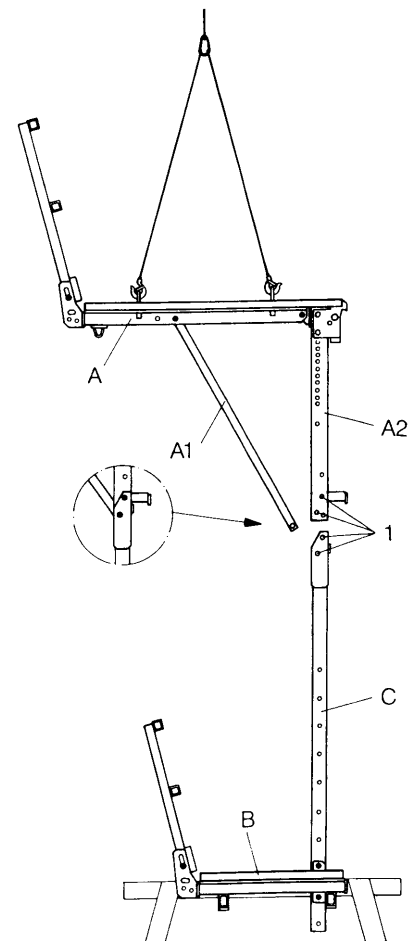
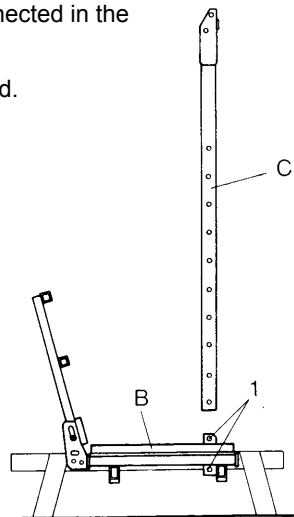
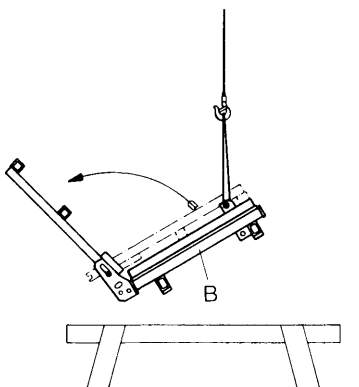
The application of KG Lower platforms creates a supplementary lower working level. The clearance to the top scaffold platform is adjustable (20-cm grid) and amounts to max. 400 cm.

From the KG Lower platform, predominantly when formwork is used, different work such as the dismantling of suspension parts, the mounting of necessary wind protections as well as reworking on the facade can be performed. The KG Lower platform has a load bearing capacity in compliance with the scaffold group 2 defined in DIN 4420 part 1.

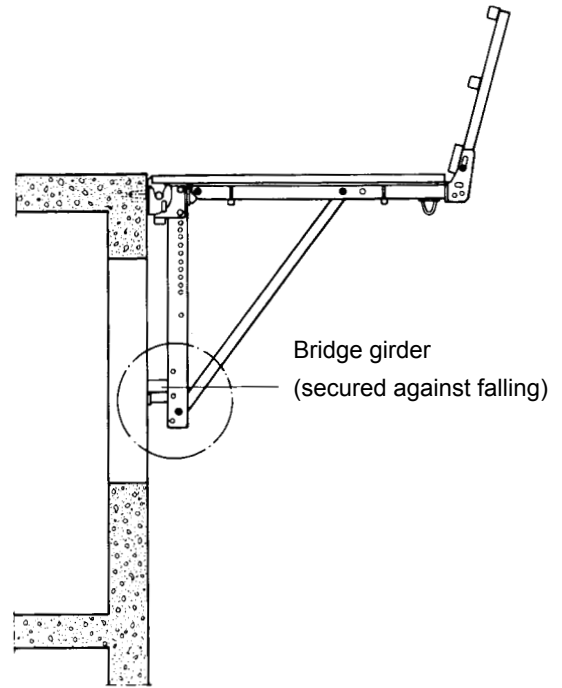
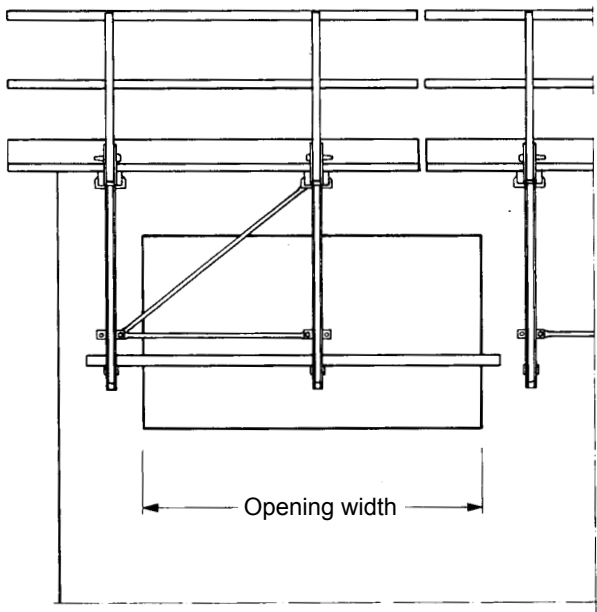
Description	Art. No.:	Number of pieces for	
		KG 300	KG 450
KG Lower platform 300	526 569	1	-
KG Lower platform 450	526 570	-	1
KG Suspension bar	526 330	2	3
Bolt 105 + spring pin	154 127	8	12

### Assembly and mounting sequence:

1. The KG Lower platform **B** is positioned on trestles using the crane. This auxiliary construction from building site materials is required when the platform clearance should be  $\leq 380$  cm.
2. When the railing is unfolded, the KG Suspension bar **C** is guided through the holes located in the bracket axis and fixed at the required height using 2 bolts **1**. (Observe the correct position of the KG Suspension bar **C**).
3. The folding scaffold unit **A** is erected as described on Page 10 and guided over the KG Lower platform hanging in the cable of the crane. The diagonal tube **A1** is not connected at the bottom during this process. The crane lowers the platform so far that the vertical bracket girder **A2** can be connected in the hinge of the KG Suspension bar **C** with 2 bolts **1**. At the same time the diagonal tube **A1** is mounted.



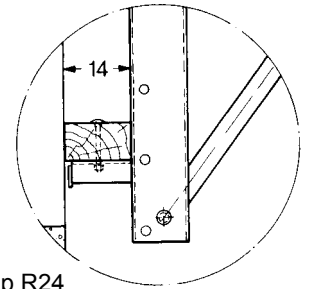
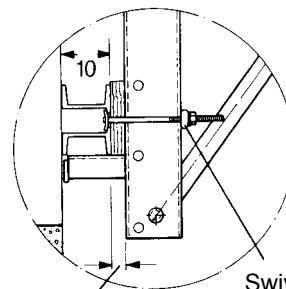
# 9.0 Bridging of openings



Bridge girder	Possible opening width in application as working scaffold + service scaffold	
Square shaped timber 12/14 cm	1.40 m	1.00 m
Cam waler	4.00 m	3.00 m
Scaffold group	up to SG 3	up to SG 6

Cam waler as bridge girder

Timber 12/14 (classification 510 DIN 4074) as bridge girder



4 cm wood packing

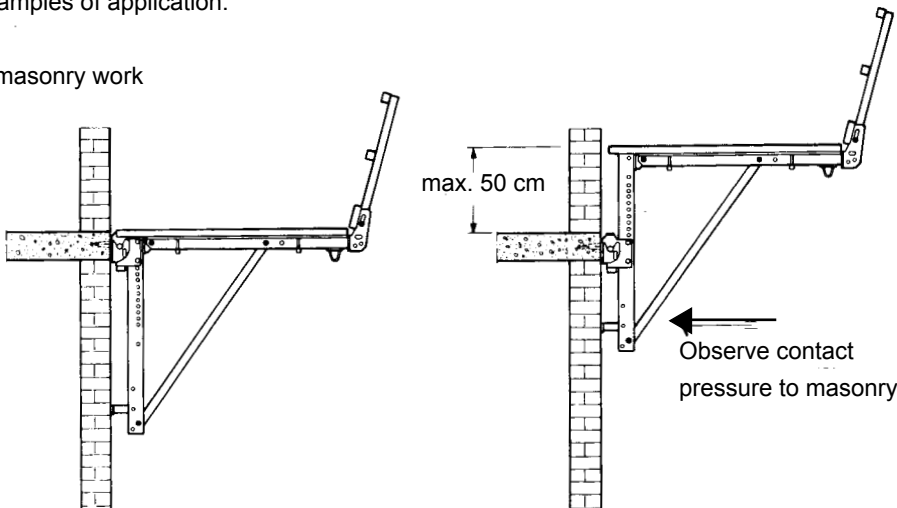
Swivel clamp R24 Art. No. 517 659

GG = scaffold group in accordance with DIN 4420 Part 1

# 10.0 height offset of the suspension

Examples of application:

in masonry work





# 11.0 Application as protection scaffold

# Folding Scaffold

The **folding scaffold** is applicable as a protection scaffold in accordance with DIN 4420 Part 1 classification scaffold group 3 (area related effective weight 200 kg/m<sup>2</sup>).

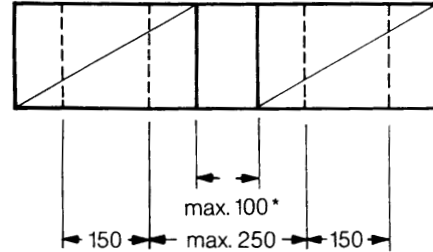
The standard suspension as well as the loop hook can be employed in this case.

The maximum compensation between the **scaffold units** amounts to 1.0 m.

A height offset in the suspension of up to 50 cm is permissible. All particulars with regard to the use as a protection or working scaffold are relevant for a height of 100 m above the ground (excluding the region of the German Bight as well as locations that are more than 1200 m above sea level).

Detail: Length compensation

Ground plan:  
(Dimensions in cm)

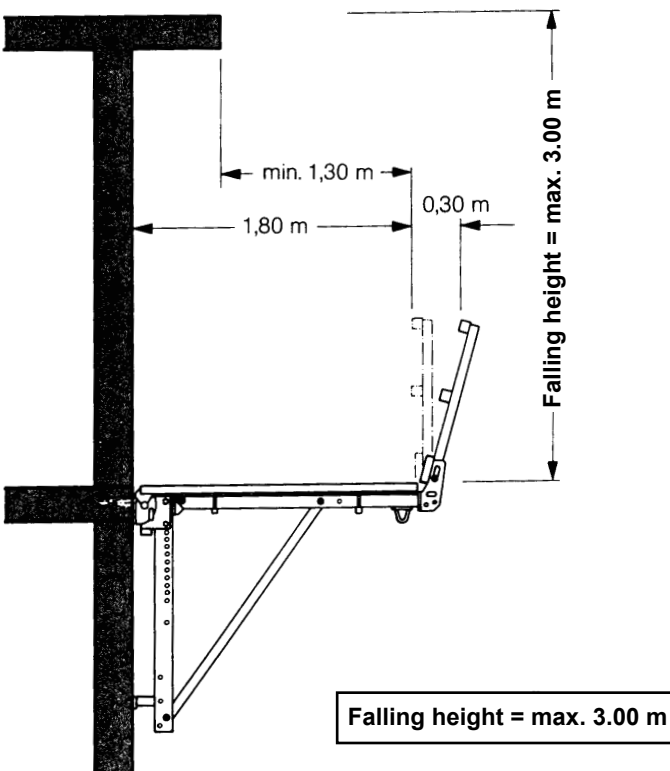


\*= the actual dimensions of the offset is always 4 cm larger than the specified system dimensions.

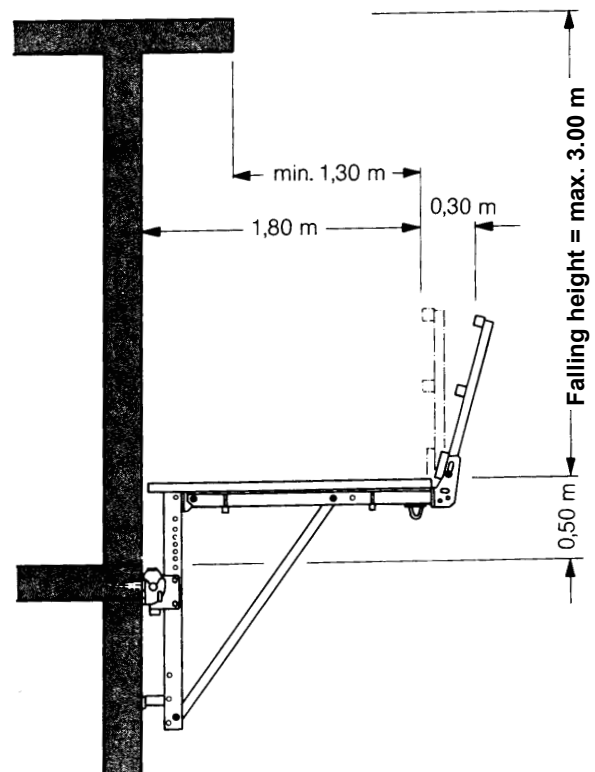
Planking bridge for application of safety scaffold:  
up to a gap of 50 cm in the facing: 1 bearing plank 24 x 5 cm.

## 1. Folding scaffold as safety scaffold in accordance with DIN 4420 Part 1

Use in normal position (without height offset)

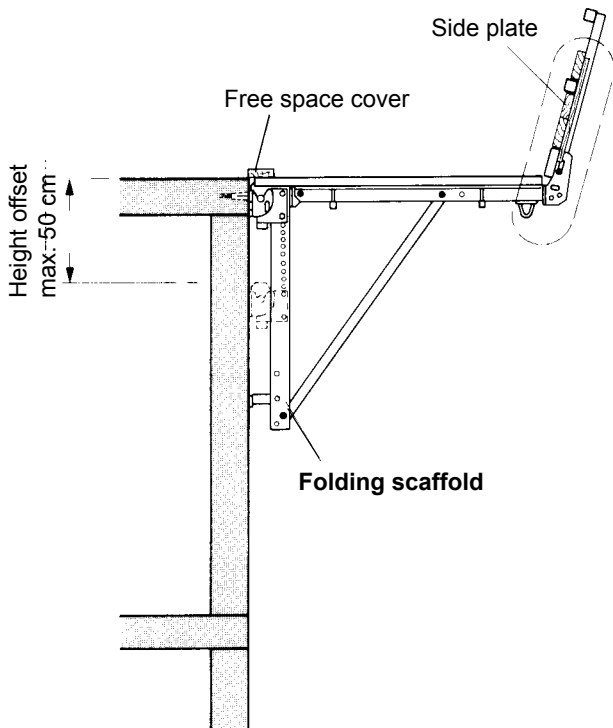


Application with height offset of 50 cm

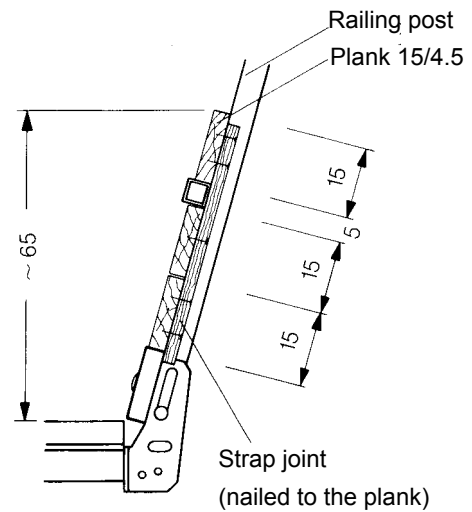


# 11.0 Application as safety scaffold

## 2. Folding scaffold as protective canopy in accordance with DIN 4420 Part 1



If the **folding scaffold** is used as a protective canopy, a board panel at least 60 cm high must be created by the insertion of planks measuring 15/4.5 cm into the guardrails. The planks are secured by means of strap joints arranged next to each post. The free space between the scaffold and the masonry must be covered with planks.



## 3. Folding scaffold as safety roof scaffold in accordance with DIN 4420 Part 1

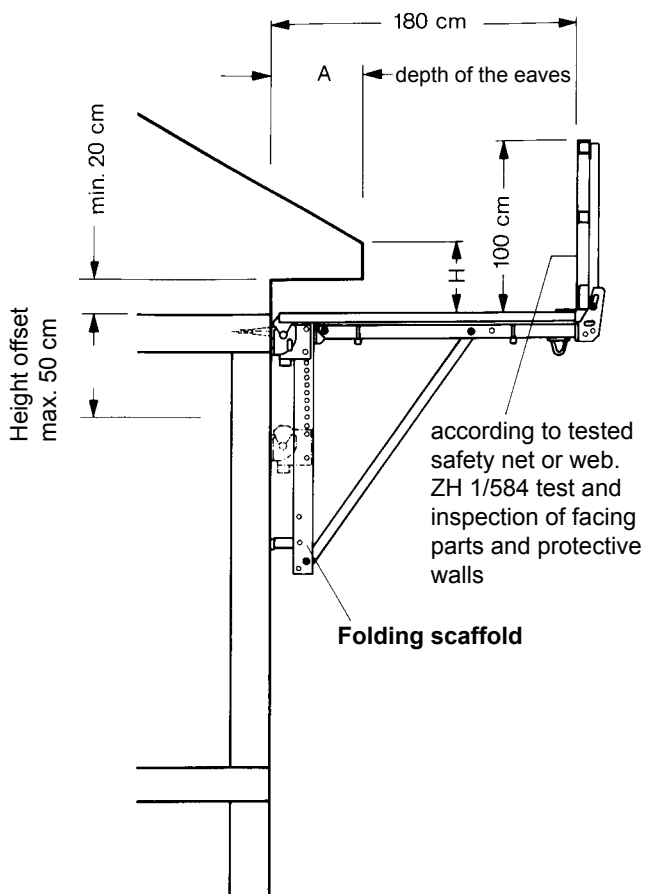
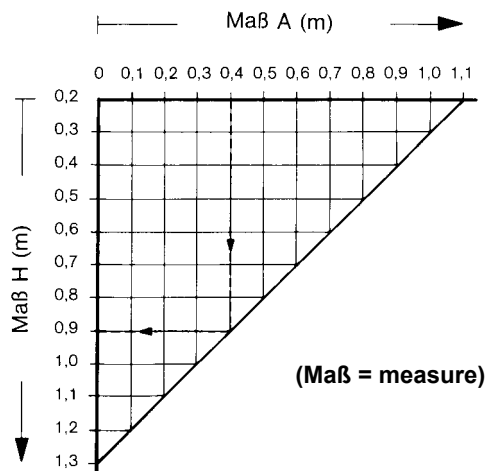


Diagram for the determination of the maximum height position of the facing dependent on the depth of the eaves.



Example for the determination of the maximum dimension „H“.  
(Clearance eave depth - facing).

Eave depth dimension „A“ = 0.4 m  
Resulting dimension „H“ = 0.9 m

## 12.0 Application as working scaffold

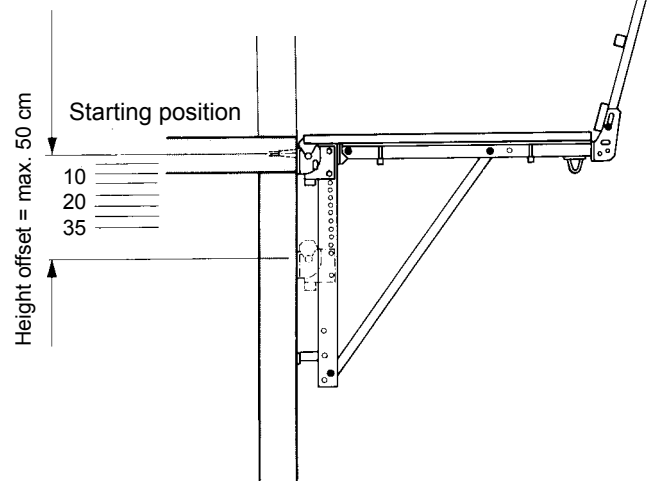
# Folding Scaffold

The folding scaffold can be employed both as working scaffolds without formwork with high live loads (e.g due to reinforcement) as well as with formwork at reduced live load (without material lining).

### Overview:

1. Working scaffold without formwork.
2. Working scaffold with formwork supported on floor structure (inside building).
3. Working scaffold with formwork supported on folding scaffold.

### Working scaffolds without formwork



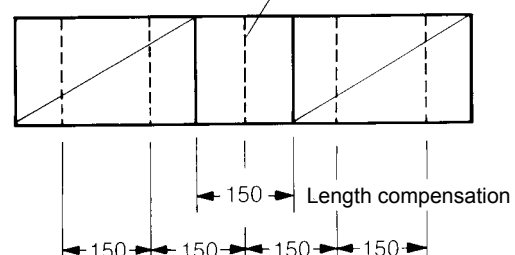
Opportunities for application in the classified scaffold groups 3 to 6						
Scaffold group:	3		4	5	6	
Area related effective load	200 kg/m <sup>2</sup>		300 kg/m <sup>2</sup>	450 kg/m <sup>2</sup>	600 kg/m <sup>2</sup>	
Load due to formwork:	with	without				
max. height offset to starting position:		50 cm*	35 cm	20 cm		
Corner formation with corner folding scaffolds R + L:	applicable					
Corner formation with covering according to Page 12	applicable	applicable	applicable			
Length compensation:	100 cm:	100 cm:	100 cm:	100 cm:	50 cm	
KG Lower platform	applicable	applicable				
Strut extension:	applicable:	applicable				
Loop hooks:		applicable				

\*= If loop hooks are employed a maximum height offset of  $\leq 25$  cm is admissible. A height offset of up to maximum 50 cm is enabled by restricting the length compensation to  $\leq 40$  cm.

In the case of a concentric support by means of a KG Single bracket length compensations of 1.50 cm are fundamentally possible.

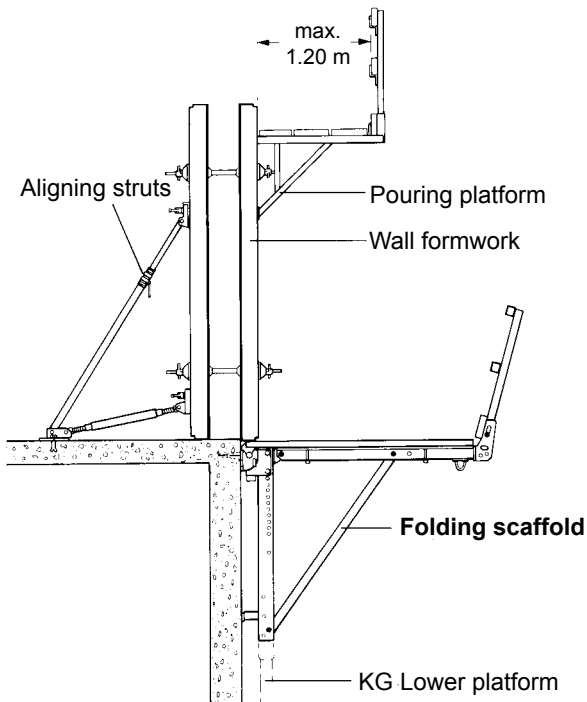
### Detail: Length compensation

Ground plan: centrally arranged KG Single bracket  
(Dimensions in cm)



# 12.0 Application as working scaffold

## 2. Working scaffold with formwork supported on floor structure.



**Folding scaffold:** scaffold group 3 in accordance with DIN 4420 (area-related effective load: 200 kg/m<sup>2</sup>).

Wall formwork up to a maximum height of 5.40 m.  
Pouring platform: scaffold group 1 (75 kg/m<sup>2</sup>).

KG Lower platform may be employed.  
Scaffold group 2 (150 kg/m<sup>2</sup>).

Facing bridging maximum 1.00 m.

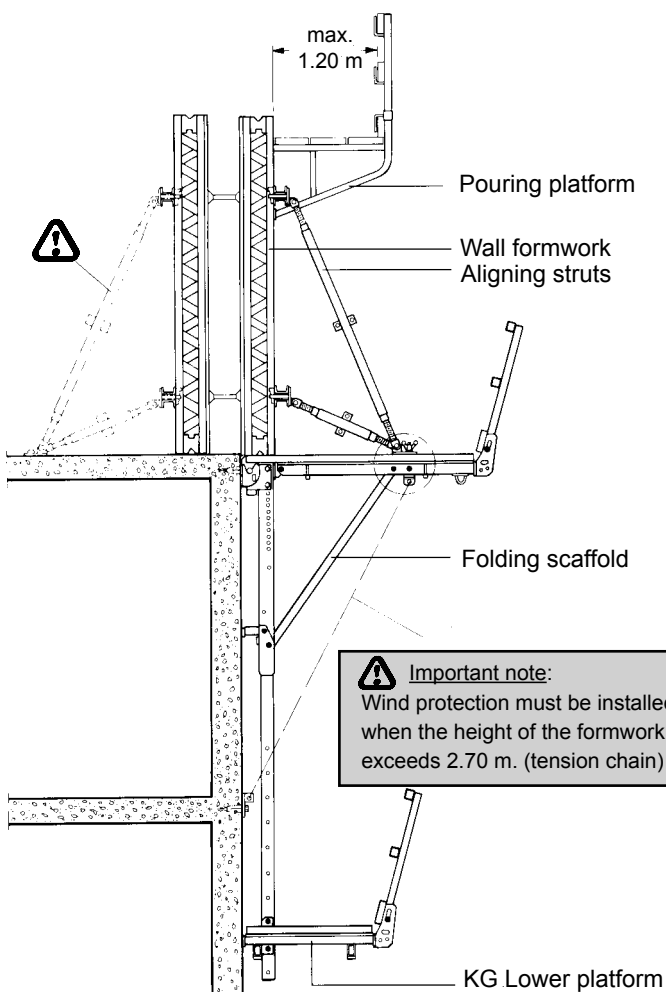
No height offset in the suspension permitted.



**Important note:**

When the height of the formwork exceeds 3.00 m a protection against falling is necessary (2 pouring platforms)!

## 3. Working scaffold with formwork supported by folding scaffold.



**Folding scaffold:** Scaffold group 3 in accordance with DIN 4420 (area related effective load: 200 kg/m<sup>2</sup>).

Wall formwork up to a max. height of 5.40 m.  
Concrete casting platform: scaffold group 1 (75 kg/m<sup>2</sup>).

KG Lower platform may be employed.  
Scaffold group 2 (150 kg/m<sup>2</sup>).

Facing bridging maximum 1.00 m.

No height offset in the suspension permitted.

in the case of wind velocity up to 15 m/s (crane operation must be ceased in the case of such wind speed in storms).



**Important note:**

The formwork must be tightly connected to the floor ceiling and pressure resistant in the case of: wind velocity exceeding 15 m/s in case of each shut-down time and prolonged interruptions in work.

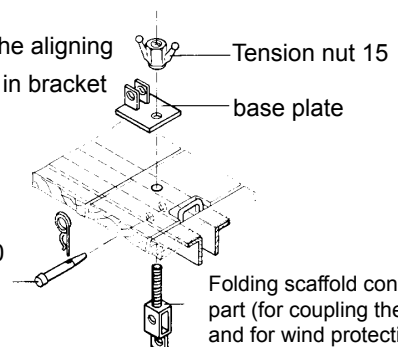


**Important note:**

Wind protection must be installed when the height of the formwork exceeds 2.70 m. (tension chain)

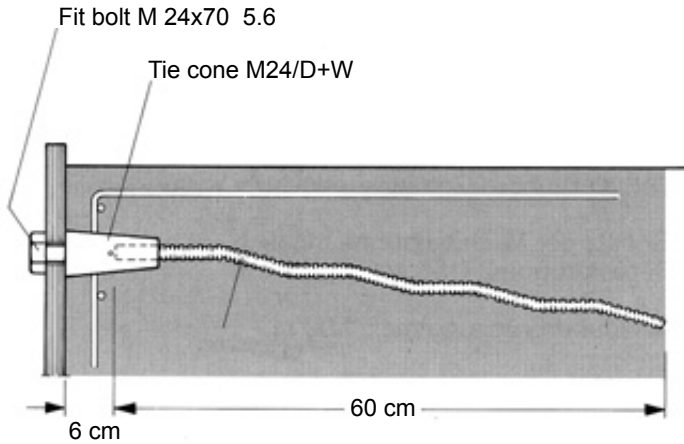
Detail: Mounting of the aligning struts (only possible in bracket axis)

Water bolt D20 + spring pin

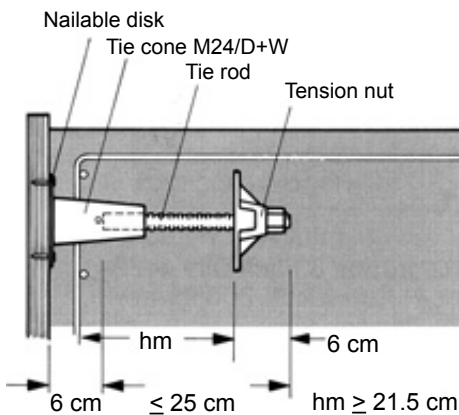


Folding scaffold connector part (for coupling the struts and for wind protection).

## 1a. Creation of the anchor point - with pigtail anchor

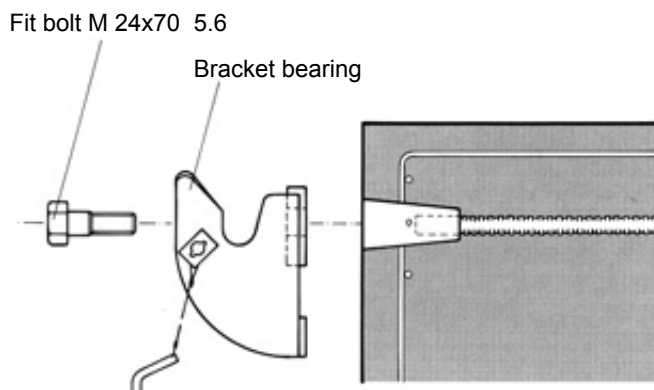


## 1b. - with tie rod and tension nut



## 2. Mounting the bracket bearing

After the removal of the formwork the bracket bearing is mounted to the anchor point with the fit bolt M 24 x 70. A ratchet with an extension and a 24 socket are suitable for this purpose.



## 3. Hook in of the folding scaffold

When the strength of the concrete at the anchor point corresponds to B 15, the folding scaffold is suspended into the bracket bearing with the crane. The scaffold must then be protected against lifting by the use of safety bolts (mounted to brackets).

The following loads could arise at the anchor point due to the cases in operation defined in this erection manual:

max. horizontal load: 16 kN

max. vertical load: 21 kN

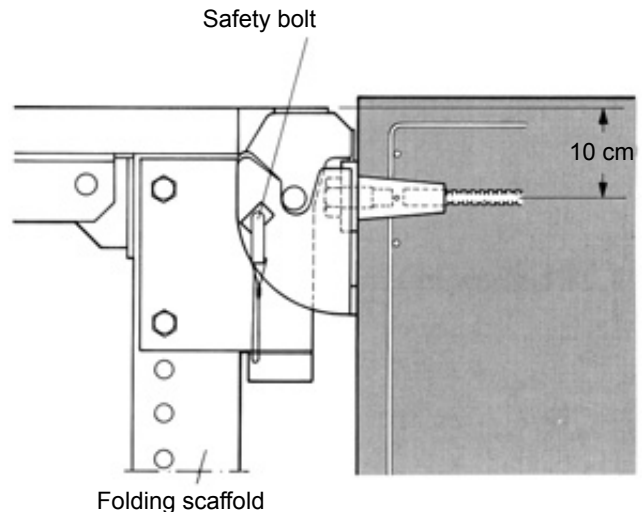
With Corner folding scaffold R/L

H = 22 kN

V = 24 kN

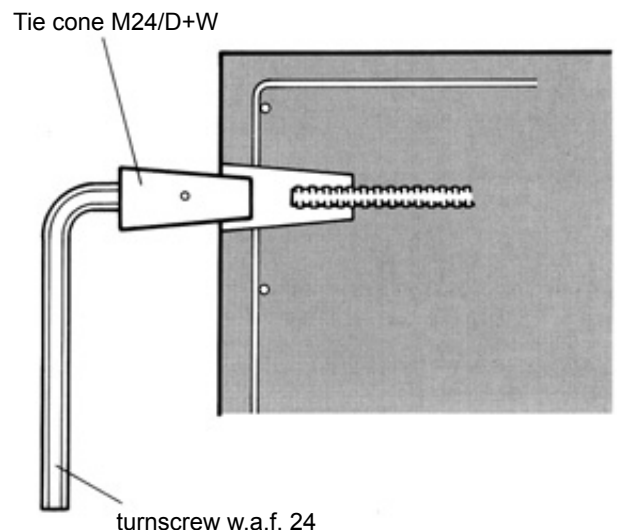
### Remarks:

Evidence must be provided of the bearing capacity of the building and building parts in relation to the specified loads.



## 4. Elimination of the anchor point

The bracket bearing is unscrewed and the tie cone is removed from the concrete using a turnscrew w.a.f. 24.

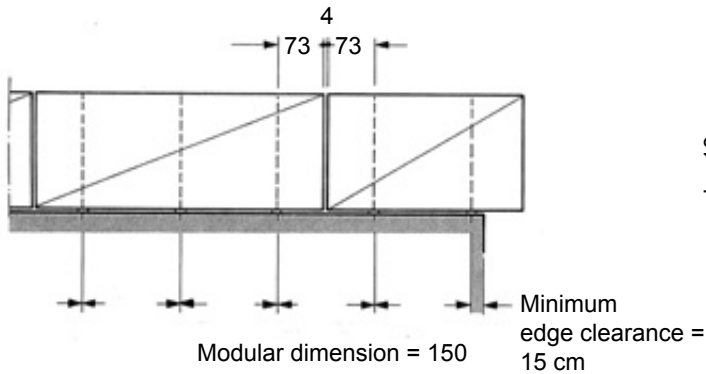


# 13.0 Anchoring

## Horizontal intervals of the anchoring points

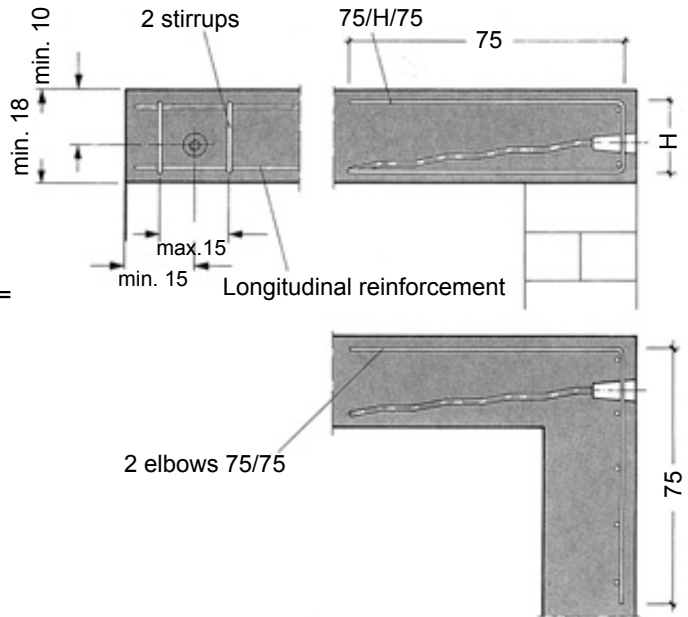
(Arrangement of the anchoring points on the corner of the building see Pages 11 + 12).

Ground plan:  
(Dimensions in cm)



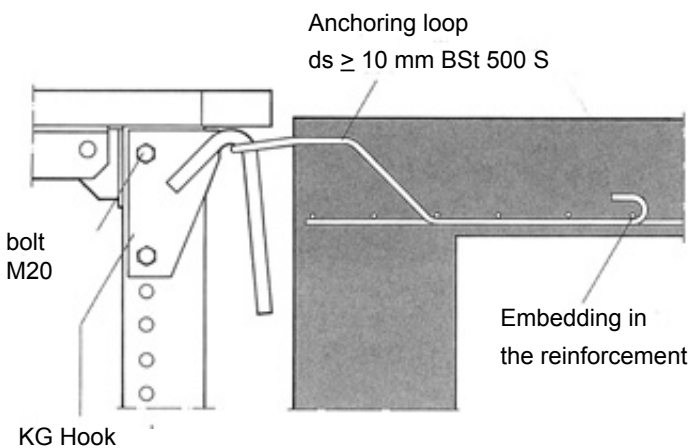
## Supplementary reinforcement on adherence to the minimum clearance

Supplementary reinforcement made of structural steel 500 S  
Ø 10 mm.  
(Dimensions in cm)

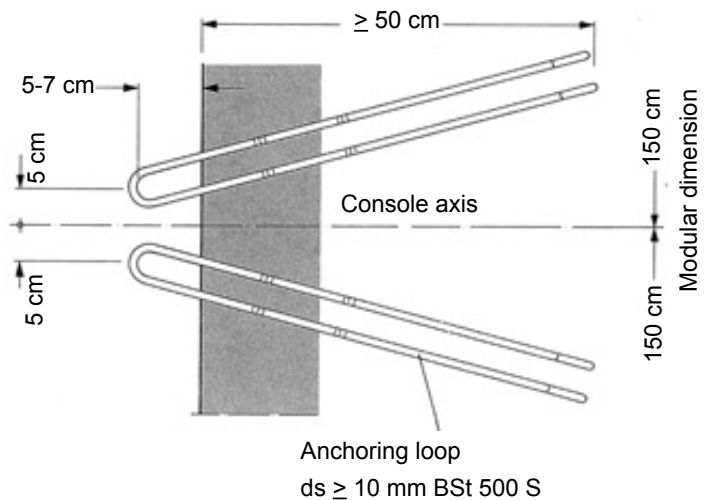


## Use with loop hooks

The folding scaffold can be anchored to the building using reinforcement loops. For this purpose the standard suspension part must be unscrewed and replaced by a KG Hook.



## Installation dimension for the anchoring loop (top view):



See table on Page 19 for areas of application.

The following loads could arise at the anchor point:

max. horizontal load: 11.5 kN

max. vertical load: 13.0 kN



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