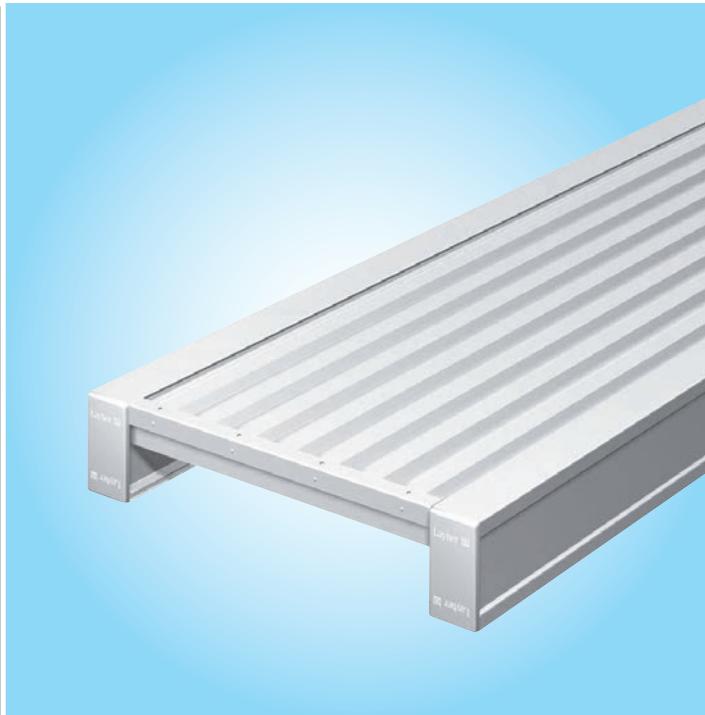


## LAYHER ALUMINIUM BRIDGING BEAM 600 INSTRUCTIONS FOR ASSEMBLY AND USE

The working deck up to 10 m long  
Permissible load class 2 ( $1.5 \text{ kN/m}^2$  up to 10 m length)  
Permissible load class 3 ( $2 \text{ kN/m}^2$  up to 7.1 m length)



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Quality management  
certified as per  
DIN EN ISO 9001



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# NOTE

The products or assembly variants shown in these Instructions for Assembly and Use may be subject to country-specific regulations. The user of the products bears the responsibility for compliance with these regulations. Subject to local regulations, we reserve the right not to supply all of the products illustrated here.

Your Layher partner on the spot will be happy to provide advice and answers to all questions relating to the products, to their use or to specific assembly regulations.

All dimensions and weights are guideline values. Subject to technical modification.

The numbers highlighted in blue in these Instructions for Assembly and Use relate to the item numbers of the available components (see Section 9).

# 1. GENERAL DIRECTIONS FOR ASSEMBLY AND USE

The present Instructions for Assembly and Use must be available to the supervisor and to the employees involved. **Only original Layher components may be used.** Visually check all components prior to installation and before they are used to ensure that they are in flawless condition. Do not use damaged components. During assembly, modification and dismantling, as well as during use of the Aluminium Bridging Beam 600, the legal regulations of the German Ordinance on Industrial Safety and Health (BetrSichV) concerning the setting up and use of working equipment must be complied with.

## Assembly

Always install the Aluminium Bridging Beam 600 horizontally. It is expressly pointed out that the Aluminium Bridging Beam 600 may only be assembled, modified and dismantled under the supervision of a qualified expert and by technically trained employees who have been adequately and specifically instructed in this work. The stability of the scaffolding must be assured at all times, including in the assembled state. To that extent, and with regard to use, we refer to the required conditions set forth in the German Ordinance on Industrial Safety and Health. Assembly, alteration and dismantling of the Aluminium Bridging Beam 600 involves risk from falls. Perform the assembly work in such a way that the risk of falls is avoided as far as possible and that the residual risk is minimised. The erector must stipulate, on the basis of how they assess the risk, suitable measures to prevent or minimize risks for the specific case and/or for the respective activities involved.

## Use

The user must check that the Aluminium Bridging Beam 600 is suitable and safe to use for the work to be performed. The user must ensure that the Aluminium Bridging Beam 600 is checked for obvious defects before use. If the inspection reveals any defects, do not use the Aluminium Bridging Beam 600 until these defects have been rectified. The user must not push against the side protection.

## Dismantling

- To dismantle scaffolding, the sequence of working steps described for assembly must be reversed.
- Anchoring must not be dismantled until the scaffolding levels above it have been completely dismantled.
- Components of which the connectors have been released must be removed immediately.
- Do not store scaffolding components on walkways, to prevent risk of tripping. Store dismantled scaffolding components correctly.

## 2. DESCRIPTION

The Aluminium Bridging Beam 600 is a lightweight work deck for bridging spans of up to 9.5 m.

It can be used for load class 2 or 3 depending on the length. The 60 cm wide aluminium structure with a non-slip walkway can be subjected to a surface load of  $2.0 \text{ kN/m}^2$  up to 7.1 m and  $1.5 \text{ kN/m}^2$  up to 10 m beam length, or alternatively to an individual load of 1.5 kN in each case. The folding version of the Aluminium Bridging Beam 600 can also be subjected to a surface load of  $1.5 \text{ kN/m}^2$  or to an individual load of 1.5 kN.

The Aluminium Bridging Beams 600 (unperforated) may be used in brick guards with a guard level of class FL1 and in roof brick guards with protective walls of class SWD 1 as per DIN 4420-1:2004 in the guard level.

## 3. ASSEMBLY

### Support

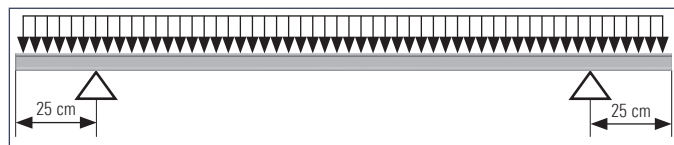


Fig. 1: Surface load  $1.5/2.0 \text{ kN/m}^2$

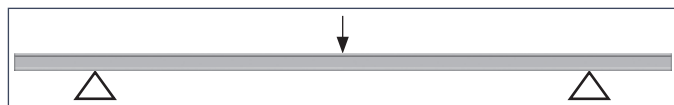


Fig. 2: Individual load 1.5 kN

Depending on the span, select the bridging beam length such that the **support length on both sides is at least 25 cm**.

The support structure must be sufficiently strong and stable. Provide a safeguard against lateral shifting, tilting and lifting. Dimension the support structure for the forces specified in the table.

Verification has already been provided for use in Layher SpeedyScaf structures as a work deck and as a deck in roof edge protection scaffolding as per item 4. Increasing the support length reduces the span and permits an increase in the load. Verification is required here for each individual case.

Beam length* (m)	Span* (m)	Load class	Support force (kN)	
			vertical	horizontal**
3.18	2.68	3	1.71	0.3
4.12	3.62	3	2.30	0.3
4.75	4.25	3	2.70	0.3
5.20	4.70	3	3.01	0.3
6.15	5.65	3	3.61	0.3
7.10	6.60	3	4.22	0.3
8.00	7.50	2	3.71	0.3
9.10	8.60	2	4.25	0.3
10.00	9.50	2	4.69	0.3
Aluminium Bridging Beam 600, folding				
5.10	4.60	2	2.93	0.3
7.30	6.80	2	3.37	0.3
9.15	8.65	2	4.28	0.3

\* Overlap length: at least 25 cm at each support

\*\* Forces from wind loads must be additionally taken into account.

## Side protection

A three-part side protection as per EN 12811-1 must be attached if required by valid regulations for work to be performed. Installation of side protection is mandatory for platform heights above 2.0 m. The distance between the Layher Aluminium Bridging Beam 600 and the structure must not exceed 30 cm. If the distance is greater, a three-part side protection must also be fitted there.

**There are two ways to design this side protection:**

### 1. Double guardrail with toe board

To do so, first suspend the guardrail fixture 8 from the beam's section and lightly wedge it in place. Depending on the guardrail length, position the fixtures with 1.0 m or 2.0 m spacing. Then attach the double guardrail 7 and secure it against lifting off using the guardrail locking clip 9. Finally, wedge the guardrail fixtures tightly.

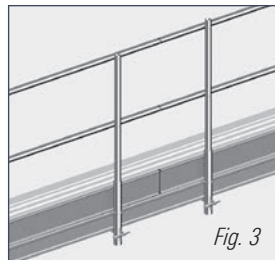


Fig. 3

### 2. Guardrail with guardrail mounting standard, Scaffolding tubes and couplers

The guardrail mounting standard 10 must be used for this variant. It is also suspended from the carrier section of the bridging beam and lightly wedged. Space the guardrail mounting standards 2 m or 3 m apart (depending on the beam length). Fit the toe board 12 onto the toe board pins provided. The guardrail mounting standard can then be firmly wedged in place. Use scaffolding couplers to attach (at the 0.5 m and 1.0 m levels) the guardrail and the intermediate rail, consisting of scaffolding tubes, using scaffolding couplers, thus forming a complete guardrail unit.

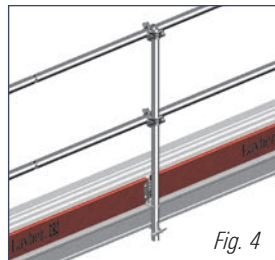


Fig. 4

## Tilt prevention

Preventing tilting is important for Aluminium Bridging Beams with attached side protection. Particular care must be taken here with freely emplaced Aluminium Bridging Beams (see Example A).

Example A:

Safeguarding of freely emplaced Aluminium Bridging Beams against tilting by attaching scaffolding tubes.

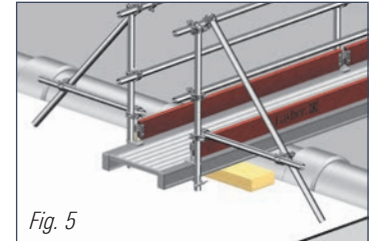


Fig. 5

Example B:

Laying in Layher SpeedyScaf 0.73 m wide with wood section coupler 4. If aluminium assembly frames are used, insert a spacer between the cross rung and the bridging beam.

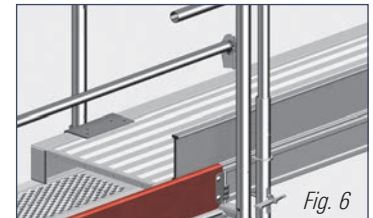


Fig. 6

Example C:

Layher SpeedyScaf 0.73 m with brick guard support holder 13 and Layher brick guard support 0.73 m 14.

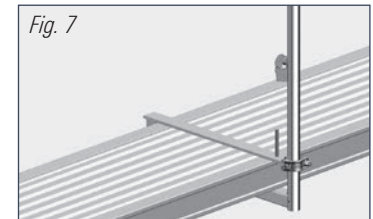


Fig. 7

## 4. USE IN LAYHER SPEEDYSCAF

Layher SpeedyScaf 0.73 m wide (steel), approved by DIBt (German Civil Engineering Institute) in Berlin as work and protective scaffolding up to load class 3 (Approval No. Z-8.1-16.2), must be assembled in accordance with the Instructions for Assembly and Use for Layher SpeedyScaf.

1. The Aluminium Bridging Beam 600 can be used in Layher SpeedyScaf structures up to a span of 3 m as a system-free scaffolding deck.

2. The Aluminium Bridging Beam 600 can be used as a bridging deck up to a span of 9.5 m or as a brick guard deck in the guard level. It is mandatory here to install three-part side protection as per EN 12811-1 or, in the case of use in brick guards, the SpeedyScaf brick guard supports in combination with SpeedyScaf guardrails and side protection nets 15 or, alternatively, SpeedyScaf brick guards 16 (*Production discontinued. Correctly functioning parts in stock may continue to be used*). (For details on assembly, see Section 5).

For use as a brick guard, the open portion of the building in the area of the side protection nets and/or brick guard must not exceed the values in the following table. The maximum scaffolding bay length is 2.57 m. Anchor the two scaffolding bays vertically every 4 m to each standard as per SpeedyScaf approval Z-8.1-16.2 using SpeedyScaf or other wall ties. For scaffolding in front of closed and partially open facades without covering, the anchoring forces are 2.1 kN. The SpeedyScaf brick guard supports used in combination with side protection nets 15 or SpeedyScaf brick guards 16 must be attached as described in Section 5.

At the top level, fit V-shaped pairs of wall ties (diagonal load of one tie 2.3 kN), (see Fig. 8). Secure all standard joints in the top two scaffolding levels with locking pins.

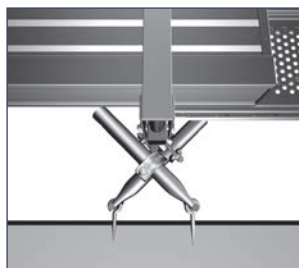


Fig. 8

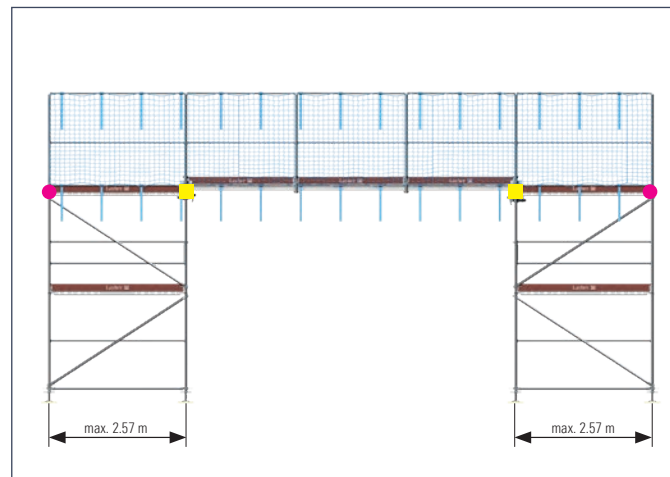


Fig. 9

● = V-type wall tie  
■ = SpeedyScaf or other wall tie

The Layher SpeedyScaf structure can be extended to both sides with further scaffolding bays.

## 4.1. Use in roof brick guard

### 4.1.1 Use of side protection nets

Only **unperforated Layher Aluminium Bridging Beams 600** may be used as brick guard decks. A protective wall in accordance with DIN 4420-1 is required when using the Aluminium Bridging Beam 600 in brick guards (see distance measures). This is created from SpeedyScaf brick guard supports **14** and brick guard support holders **13**, SpeedyScaf guardrails **11** and side protection nets **15**. For the detailed assembly steps, the instructions for assembly and use for approval Layher SpeedyScaf 70 steel Z-8.1-16.2 must be observed. Position the SpeedyScaf brick guard support **14** at the aluminium beam from underneath and clamp it to the beam from above using the brick guard support holder **13**. Insert the two parts into one another, secure them using the pre-mounted bolt and connect with the half-coupler on the other side. (See Figures 10 + 11) Then attach SpeedyScaf guardrails **11**, toe boards **12** and side protection nets **15** at the locations provided. For information on tilt prevention when mounting in Layher SpeedyScaf, see Section 3. On each side, use two connections made from scaffolding tubes and couplers to attach the outside SpeedyScaf brick guard supports **14** in the area of the Aluminium Bridging Beam 600 to the brick guard supports or the SpeedyScaf assembly frame of the scaffolding structure that is to be connected. Alternatively, you can also directly attach the SpeedyScaf guardrails at the Layher Aluminium Bridging Beam **14** or the SpeedyScaf assembly frame of the scaffolding structure that is to be connected. During this assembly stage, it is necessary to pay attention to the exact bay arrangement of the SpeedyScaf components on the aluminium bridging beam (see table of permissible application variants of the Aluminium Bridging Beam 600 on page 8).



Fig. 10

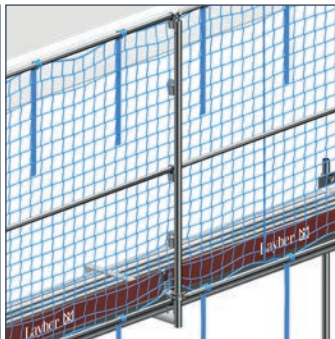


Fig. 11

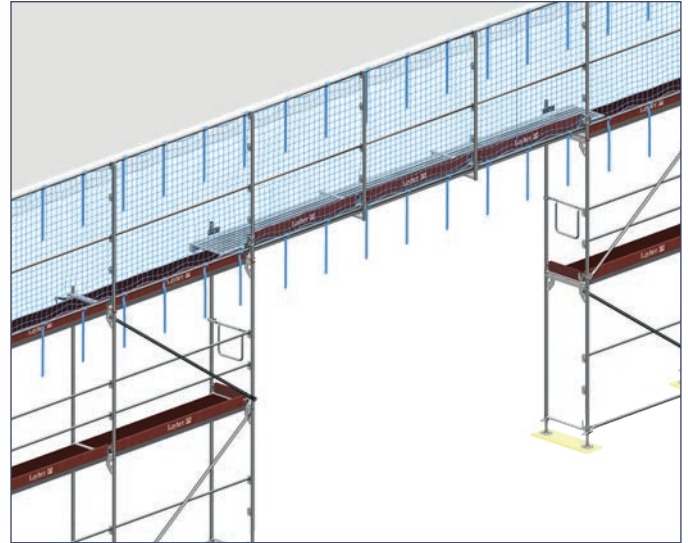


Fig. 12

### 4.1.2 Mounting the side protection nets

The side protection nets **15** are fastened to the inside (in front of the guardrails and posts), in each case at the height of the floors and 2 m above them on the SpeedyScaf brick guards **11** with quick-action belt fasteners at a distance of at least 75 cm from the SpeedyScaf brick guards **11**. At the net joint, the butted nets must overlap by at least 75 cm.



Fig. 13 Attaching the side protection net to the upper SpeedyScaf guardrail

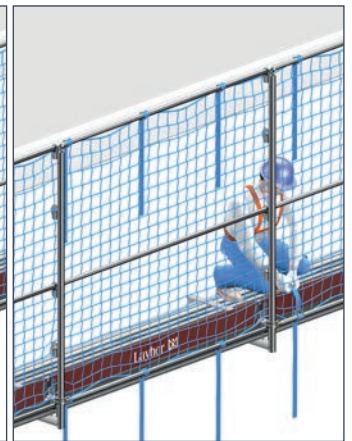


Fig. 14 Attaching the side protection net to the lower flash guardrail

#### 4.1.3 Using SpeedyScaf brick guards

*(Production discontinued! Correctly functioning parts in stock may continue to be used).*

Only **unperforated Layher Aluminium Bridging Beams 600** may be used as brick guard decks. A protective wall in accordance with DIN 4420-1 is required when using the Aluminium Bridging Beam 600 in brick guards (see clearance dimensions). This is created from SpeedyScaf brick guard supports [14](#) and brick guard support holders [13](#), SpeedyScaf guardrails [11](#) and brick guards [16](#). Position the SpeedyScaf brick guard support [14](#) at the aluminium beam from underneath and clamp it to the beam from above using the brick guard support holders [13](#). Insert the two parts into one another, secure them using the pre-mounted bolt and connect with the half-coupler on the other side. Then attach SpeedyScaf brick guards [11](#) and toe boards [12](#) at the location provided. For information on tilt prevention when mounting in Layher SpeedyScaf, see Section 3. On each side, use two connections made from scaffolding tubes and couplers to attach the outside SpeedyScaf brick guard supports [14](#) in the area of the Aluminium Edging Beam 600 to the SpeedyScaf brick guard supports or the SpeedyScaf assembly frame of the scaffolding structure that is to be connected. Alternatively, you can also directly attach the brick guards of the Layher Aluminium Bridging Beam to the outer brick guard support or the SpeedyScaf assembly frame of the scaffolding structure that is to be connected. During this assembly stage, it is necessary to pay attention to the exact bay arrangement of the SpeedyScaf components on the aluminium bridging beam (see table of permissible application variants of the Aluminium Bridging Beam 600 on page 8).

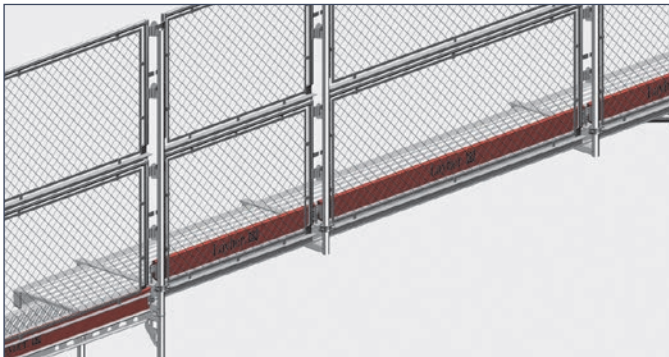


Fig. 15

#### 4.1.4 Clearance dimensions

In accordance with DIN 4420-1, the guard level of the brick guard must not be lower than 1.50 m ( $h_0$ ) below the risk-of-fall edge (e.g. eaves).

The distance ( $b$ ) of the protective wall from the risk-of-fall edge must be at least 0.70 m.

The projection of the protective wall, relative to the risk-of-fall edge, must comply with the following condition:  $h_1 - h_0 \geq 1.50 \text{ m} - b$

However, the height  $h_1$  of the protective wall must be at least 1.00 m (see Fig. 16).

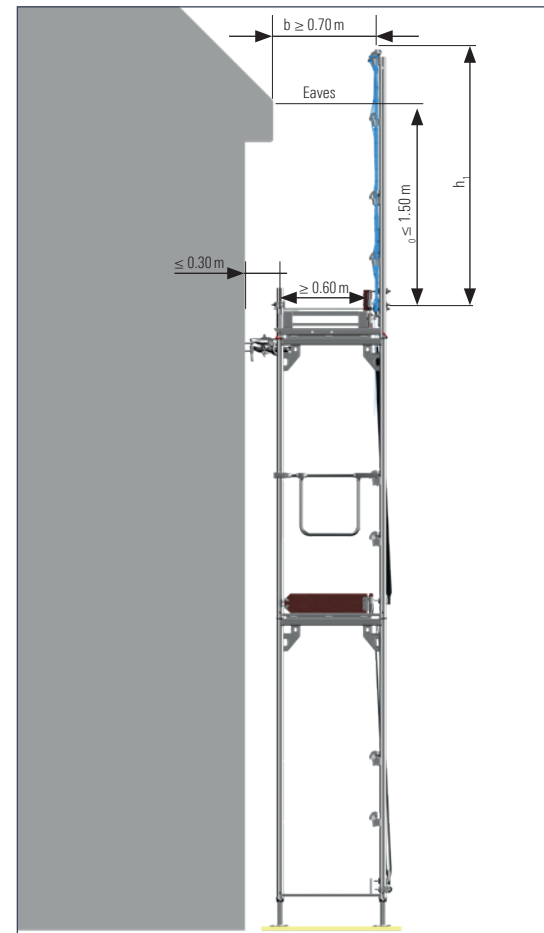


Fig. 16

Permissible variants for use of the Aluminium Bridging Beam 600 in brick guards				
Beam length (m)	Span (m)	Load class in accordance with EN 12811-1	Suggested bay arrangement at the beam	In front of facades with open part in the area of the side protection nets / <i>brick guards</i>
3.18	2.68	3	2.57	up to 60 %
4.12	3.62	3	3.07	up to 60 %
4.75	4.25	3	2.07 + 2.07	up to 60 %
5.20	4.70	3	2.57 + 2.07 2.07 + 2.07	up to 60 %
6.15	5.65	3	2.57 + 2.57 2.57 + 3.07	up to 60 % up to 33 %
7.10	6.60	3	2.07 + 2.07 + 2.07 3.07 + 3.07	0 % 0 %
8.00	7.50	2	2.07 + 3.07 + 2.07	up to 46 %
9.10 (10.00)	8.60	2	2.57 + 3.07 + 2.57	0 %

Permissible variants for use of the Aluminium Bridging Beam 600, folding, in brick guards				
5.15	4.65	2	2.57 + 2.07	up to 60 %
7.30	6.80	2	1.57 + 2.57 + 1.57 2.07 + 2.07 + 2.07	0 %
9.15	8.65	2	2.57 + 3.07 + 2.57 2.57 + 2.57 + 2.57	0 %

## 5. BEAM CONNECTION

Using the clamp [3](#), it is possible to join up several beams as a platform for joint load-bearing. To connect up beams and so that they can sustain loads together, place this clamp on the adjacent sections (in the centre up to 7.1 m, from 8.0 m to 10.0 m at the third-of-the-distance points) and tightly wedge it. **The clamp cannot be used for the folding Aluminium Bridging Beam 600.**

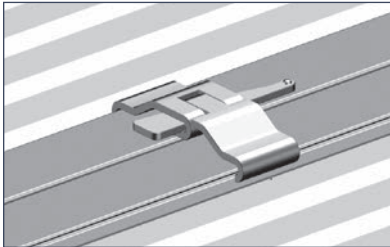


Fig. 17

## 6. ALUMINIUM BRIDGING BEAM 600, PERFORATED VERSION

*(Production discontinued! Correctly functioning parts in stock may continue to be used).*

The Aluminium Bridging Beam 600 in its perforated version as well as in its unperforated version can be used as a work deck in bridging applications as per these Instructions for Assembly and Use. **Use in brick guards is not permissible!**

# 7. COMPONENTS

## Aluminium Bridging Beam 600 – Variants

1



1348.xxx Aluminium Bridging Beam 600

### 1328.xxx Aluminium Bridging Beam 600, perforated

*(Production discontinued! Correctly functioning parts in stock may continue to be used).*

Not shown. The possible uses set forth in these Instructions for Assembly and Use can also be achieved using the *perforated Aluminium Bridging Beam 600*. Only **use in brick guards is not permissible**.

Length [m]	Loading capacity [kN/m²]	Width [m]	Height [m]	Weight [kg]	Ref. No.	Weight [kg]	Ref. No.
3.18	2.0	0.6	0.09	20.0	1348.318	18.6	1328.318
4.12	2.0	0.6	0.09	26.0	1348.412	24.3	1328.412
4.75	2.0	0.6	0.09	29.0	1348.475	27.0	1328.475
5.20	2.0	0.6	0.12	38.0	1348.520	33.6	1328.520
6.15	2.0	0.6	0.12	45.0	1348.615	40.0	1328.615
7.10	2.0	0.6	0.12	52.0	1348.710	46.0	1328.710
8.00	1.5	0.6	0.15	68.0	1348.800	59.0	1328.800
9.10	1.5	0.6	0.15	76.0	1348.910	66.0	1328.910
10.00	1.5	0.6	0.15	85.0	1348.100	74.0	1328.100

2



1349.xxx Aluminium Bridging Beam 600, folding

### 1329.xxx Aluminium Bridging Beam 600, folding and perforated

*(Production discontinued! Correctly functioning parts in stock may continue to be used).*

Not shown. The possible uses set forth in these Instructions for Assembly and Use can also be implemented using the *folding, perforated Aluminium Bridging Beam 600*. Only **use in brick guards is not permissible**.

Length [m]	Loading capacity [kN/m²]	Width [m]	Height [m]	Weight [kg]	Ref. No.	Weight [kg]	Ref. No.
5.10	1.5	0.6	0.12	47.0	1349.510	43.0	1329.318
7.30	1.5	0.6	0.12	61.0	1349.730	56.6	1329.412
9.15	1.5	0.6	0.15	86.0	1349.915	75.0	1329.475

## Accessories

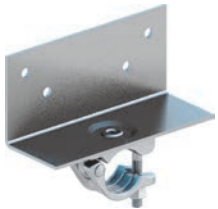
3



### 1331.000 Clamp

steel. For connecting the Aluminium Bridging Beam 600 (not suitable for the folding Aluminium Bridging Beam 600).  
Weight 0.4 kg

4



### 4717.019 Wood section coupler WS 19

4717.022 Wood section coupler WS 22  
steel. As lift-off preventer.  
Weight 1.9 kg

5



### 4700.019 Special coupler, rigid, WS 19

4700.022 Special coupler, rigid, WS 22  
steel. Class BB, EN 74-1 RA BB C3 M, quality-monitored, for use in the classes B and BB on steel and aluminium tube.  
Weight 1.3 kg

6

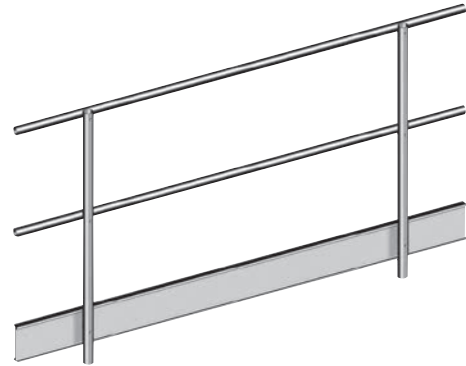


### 4702.019 Special coupler, swivelling, WS 19

4702.022 Special coupler, swivelling, WS 22  
steel. Class B, EN 74-1 SW B C3 M, quality-monitored, for use in class B at steel and aluminium tubes.  
Weight 1.5 kg

## Accessories for three-part side protection

7



### 1332.200 Double guardrail with toe board 2.0 m,

Aluminium. Folds together for transport. Dimensions 1.1 x 2.0 m, weight 9.7 kg.

### 1332.300 Double guardrail with toe board 3.0 m,

Aluminium. Folds together for transport. Dimensions 1.1 x 3.0 m, weight 12.9 kg.

Ref. No.	6201 3.18 m	6202 4.12 m	6203 4.75 m	6204 5.20 m	6205 6.15 m	6206 7.10 m	6207 8.00 m	6208 9.10 m	6209 10.00 m
1332.200	0	2	1	1	0	2	1	0	2
1332.300	1	0	1	1	2	1	2	3	2
1330.000	2	4	4	4	4	6	6	6	8
1333.000	1	2	2	2	2	3	3	3	4

Ref. No.	6210 5.10 m	6211 7.30 m	6212 9.15 m
1332.200	2	0	4
1332.300	0	2	0
1330.000	4	4	8
1333.000	2	2	4

8



### 1330.000 Guardrail fixture for item 1332

Aluminium. For fastening the double guardrail to the Aluminium Bridging Beam.  
Length 0.5 m, weight 0.9 kg.

9



### 1333.000 Guardrail locking clip for item 1330

steel. For securing the double guardrails with the guardrail fixture. Weight 0.1 kg

10



**1334.000 Guardrail mounting standard 1.2 m**  
Aluminium. For connecting the three-part brick guard made from scaffolding tubes, guardrail clamps and toe board.

Length 1.2 m, weight 2.4 kg.

11



**1725.157 SpeedyScaf guardrail, 1.57 m**, steel. Weight 2.9 kg

**1725.257 SpeedyScaf guardrail, 2.57 m**, steel. Weight 4.7 kg

**1725.207 SpeedyScaf guardrail, 2.07 m** steel. Weight 3.8 kg

**1725.307 SpeedyScaf guardrail, 3.07 m**, steel. Weight 5.6 kg

12



**1757.157 Toe board, 1.57 m**  
wood. Weight 3.1 kg

**1757.257 Toe board, 2.57 m**  
wood. Weight 5.6 kg

**1757.207 Toe board, 2.07 m**  
wood. Weight 4.7 kg

**1757.307 Toe board, 3.07 m**  
wood. Weight 6.8 kg

13



**1771.073 Guardrail support and brick guard support holder, 0.73 m**,  
steel. Weight 6.0 kg

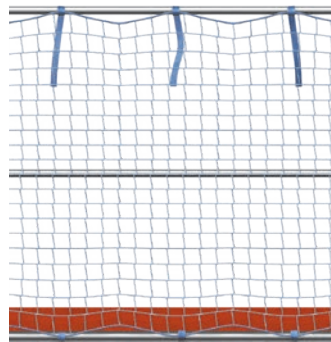
## Accessories for brick guards

14



**1748.003 Brick guard support, 0.73 m**  
steel. Weight 12.1 kg

15



**6232.002 Side protection net with quick strap fastener**

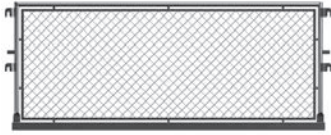
Dimensions 10.00 x 2.00 m,  
weight 5.9 kg.

Mesh width specification 100 mm,  
blue, made from PPM 4.5 mm,  
knotless, as per DIN EN 1263-1



Side protection nets must be checked every year!

Side protection nets may only be used within a year of their being tested. If older protection nets are used, inspections must be performed to verify that the maximum tensile strength of the net yarn is still at least 2 kN. This testing of your Layher side protection nets is free of charge for you. To benefit from this, please send a test thread to Layher.



**1749.157 SpeedyScaf brick guard,**

**1.57 m**

Dimensions 1.00 x 1.57 m,  
weight 15.5 kg.

**1749.207 SpeedyScaf brick guard,**

**2.07 m**

Dimensions 1.00 x 2.07 m,  
weight 17.7 kg.

**1749.257 SpeedyScaf brick guard,**

**2.57 m**

Dimensions 1.00 x 2.57 m,  
weight 21.1 kg.

**1749.307 SpeedyScaf brick guard,**

**3.07 m**

Dimensions 1.00 x 3.07 m,  
weight 24.4 kg.

*(Production discontinued! Correctly functioning parts in stock may continue to be used).*

## 8. CERTIFICATE

In view of possible expiry dates and/or updating, you can obtain the appropriate certificate on request using the contact details stated overleaf.







More Possibilities. The Scaffolding System.

**Wilhelm Layher GmbH & Co KG**  
Scaffolding Grandstands ladders

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