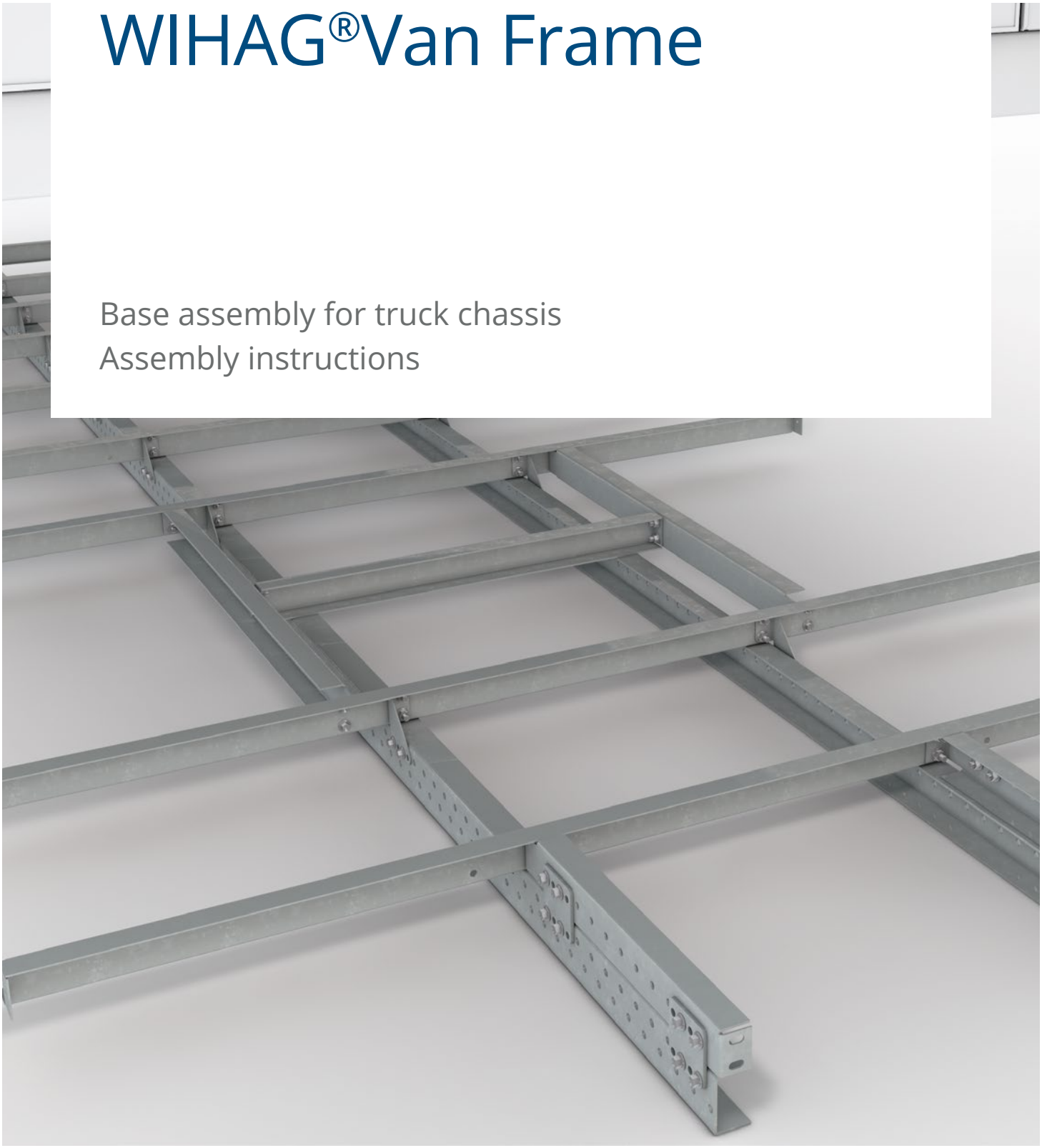
WIHAG

WIHAG®Van Frame

Base assembly for truck chassis
Assembly instructions



Notes

WIHAG®Van Frame base assembly

The base frames (vehicle subframe) must always be assembled in accordance with the vehicle manufacturer's assembly instructions and are suitable for chassis with a gross vehicle weight of up to 12 t.

Technical specifications

- Maximum overall length of base frame 7800 mm
- Overall length available in increments of 25 mm
- Overall width of base frame max. 2505 mm
- The longitudinal members can be fitted as infinitely adjustable elements ranging from 844 to 866 mm
- Longitudinal member dimensions: 100/60/5, 120/60/6 or 140/70/6 mm
- The 80 mm high cross-members are designed for base frame lengths of 1250 and 1500 mm
- The cross-members can be installed in 25 mm increments and the spacing between the cross-members will need to be adjusted depending on the required loads
- Wheel arch cut-out 1000 or 1250 mm; the spacing between the cross-members is 980 mm
- All components are made of high-strength S355 MC fine-grain steel and are hot-dip galvanised

Screw fasteners

- M 10 to connect the side raves (Item 6) to the cross-members (Item 2) and the aluminium ramming and impact protection profile (Item (14) to the side rave (Item 6)
- M 12 fasteners to connect the other components

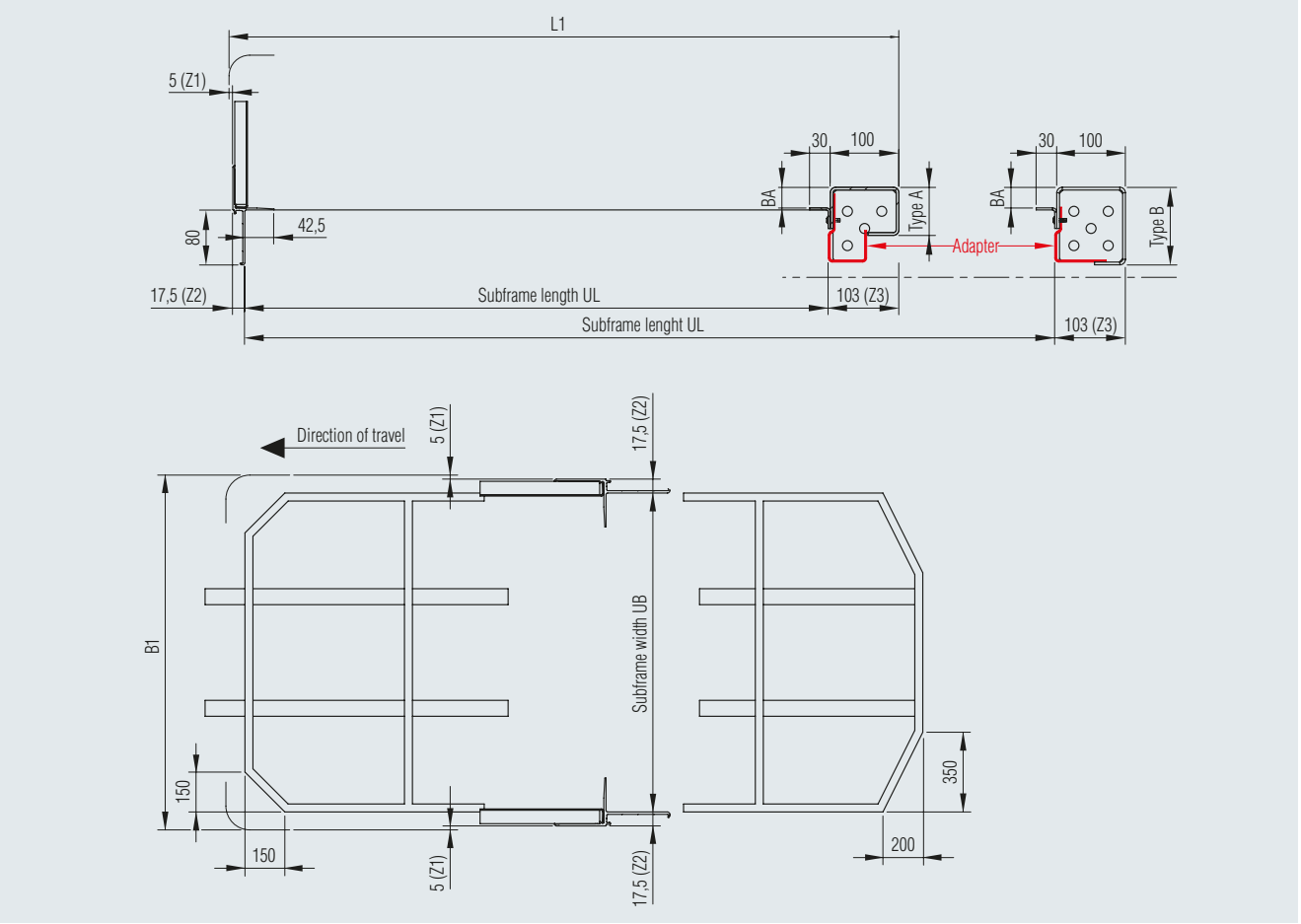
Torque for screw fasteners

Thread size	Screw grade	Torque [Nm]
M 8	8.8	25
M 10	8.8	49
M 12	8.8	86*

* Flange bolts with flange nuts

Base assembly dimensions

Base frame dimensions for bolted-on rear frame



Calculation of subframe dimensions

Formula:
Subframe dimensions =
external length or width - adjustment dimension

Sample calculation:
Subframe length UL = L1 - Z1 - Z2 - Z3
Subframe width UB = B1 - (Z1 + Z1) - (Z2 + Z2)

Description:

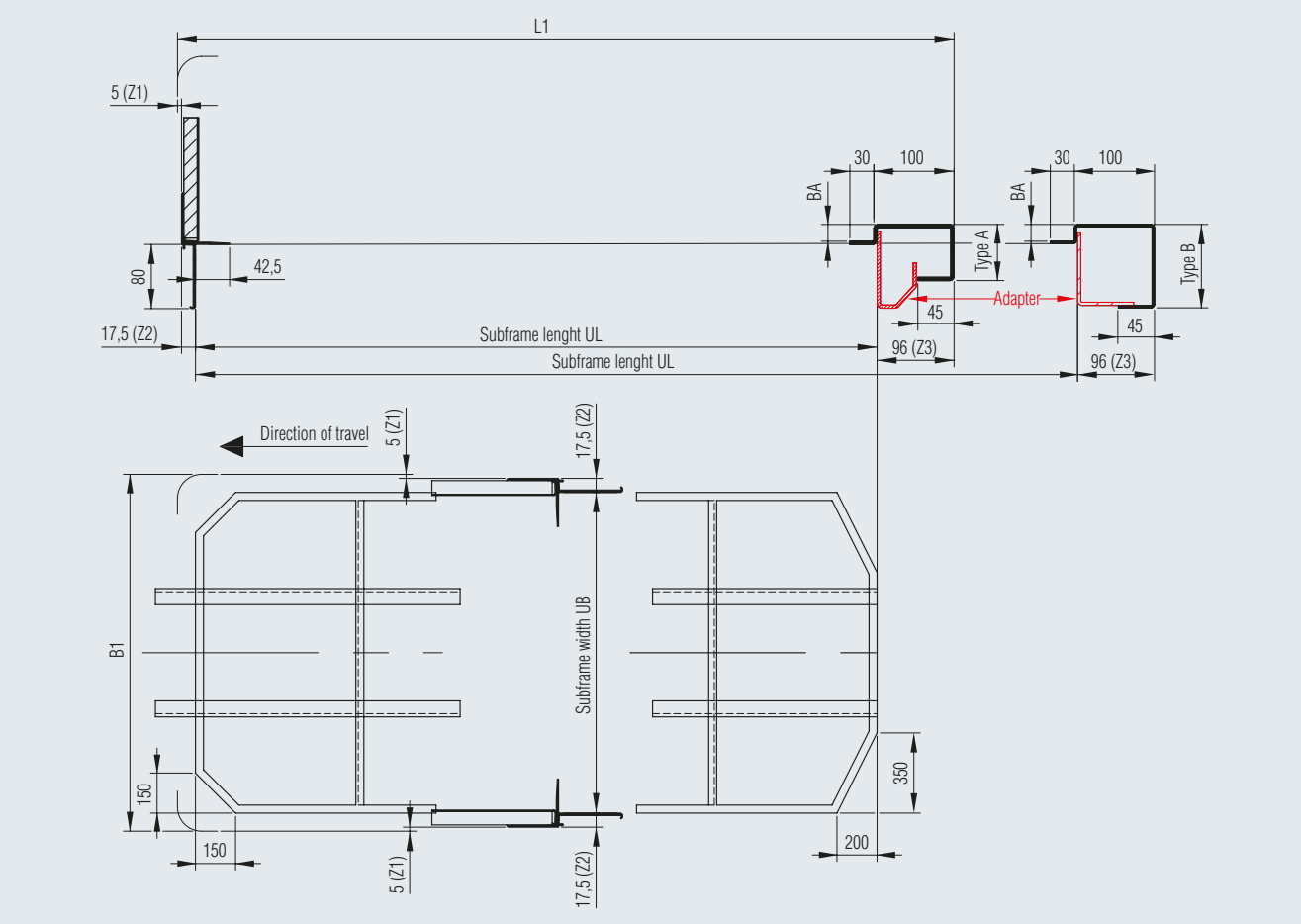
Subframe dimensions	= UL subframe length = UB subframe width
External length	= L1 external length of roof from bulkhead roof corners to outer edge of rear frame holder
External width	= B1 Total width measured over roof corners
Adjustment dimensions	= Z1 corner cap adjustment = Z2 rave adjustment = Z3 rear frame bottom member adjustment

Subframe dimensions of body kits with WIHAG®Van Frame bulkhead, rear portal

Rear frame bottom member Type A	Rear frame bottom member Type B	Subframe length UL [mm]	Subframe width UB [mm]
BA 18/70	BA 18/113	L1 – 125,5	B1 – 45
BA 21/70	BA 21/113	L1 – 125,5	B1 – 45
BA 24/70	BA 24/113	L1 – 125,5	B1 – 45
BA 27/70	BA 27/113	L1 – 125,5	B1 – 45

Base assembly dimensions

Subframe dimensions with welded-on rear frame



Calculation of subframe dimensions

Formula:
Subframe dimensions =
external length or width - adjustment dimension

Sample calculation:
Subframe length UL = L1 - Z1 - Z2 - Z3
Subframe width UB = B1 - (Z1 + Z1) - (Z2 + Z2)

Description:

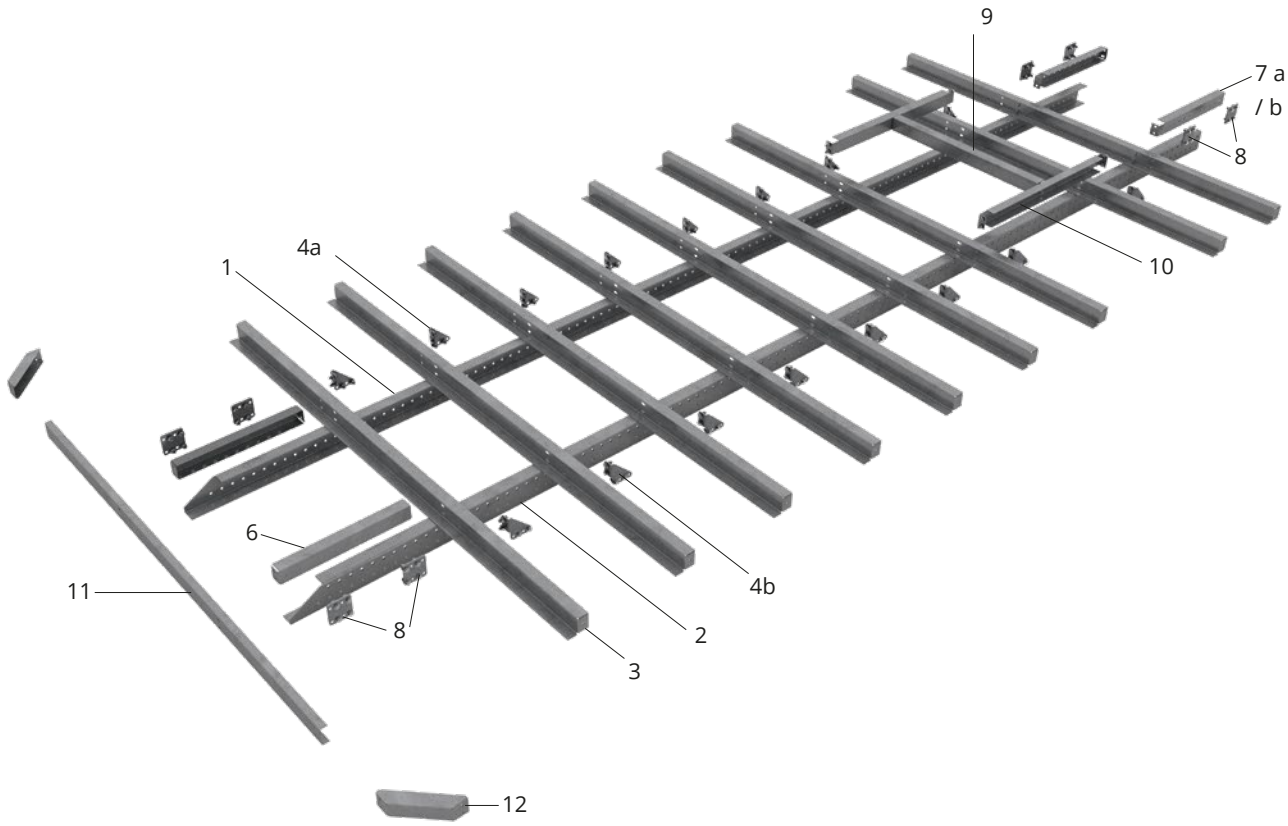
Subframe dimensions	= UL subframe length = UB subframe width
External length	= L1 external length of roof from bulkhead roof corners to outer edge of rear frame holder
External width	= B1 Total width measured over roof corners
Adjustment dimensions	= Z1 corner cap adjustment = Z2 rave adjustment = Z3 rear frame bottom member adjustment

Subframe dimensions of body kits with WIHAG®Van Frame bulkhead, rear portal

Rear frame bottom member Type A	Rear frame bottom member Type B	Subframe length UL [mm]	Subframe width UB [mm]
BA 18/70	BA 18/101	L1 - 118,5	B1 - 45
BA 21/70	BA 21/104	L1 - 118,5	B1 - 45
BA 24/70	BA 24/107	L1 - 118,5	B1 - 45
BA 27/70	BA 27/110	L1 - 118,5	B1 - 45

Parts list

WIHAG®Van Frame subframe (steel version)



Parts list

WIHAG®Van Framebase assembly

The base assemblies only differ in terms of their cross-members and their connecting profiles!

Item WIHAG®Van Frame	Description	Material	Lenght [mm]	Weight approx.	Article No.
1/2	Long. member 100 x 60 x 5 symmetrical	Steel	7800	7.7 kg/m	**217 010 780**
1/2	Long. member 120 x 60 x 6 symmetrical	Steel	7800	10.0 kg/m	**217 012 780**
1/2	Long. member 140 x 70 x 6 symmetrical	Steel	7800	11.8 kg/m	**217 014 780**
3	Steel cross-member Z profile 80 x 50 x 3	Steel	2505	10.2 kg/unit	**217 051 000**
4a	Connecting bracket steel cross-member, right 111 x 43 x 111 x 3	Steel	–	0.23 kg/unit	**217 092 000**
4b	Connecting bracket steel cross-member, left 111 x 43 x 111 x 3	Steel	–	0.23 kg/unit	**217 093 000**
6	Auxiliary long. member, front, 72 x 50 x 3 x 586	Steel	–	2.4 kg/unit	**217 058 000**
7 a 7 b	Auxiliary long. member, rear, 80 x 50 x 3 x 649 Auxiliary long. member, rear, 80 x 50 x 3 x 349	Steel Steel	– –	2.4 kg/unit 1.36 kg/unit	**217 065 000** **217 066 000**
8	Assembly plate 100 x 100 x 6	Steel	–	0.42 kg/unit	**217 095 000**
9	Cross-member wheel arch cut-out 980 x 50 x 80 x 4	Steel	980	5.3 kg/unit	**217 070 000**
10	Long. member wheel arch cut-out 996 x 50 x 80 x 4	Steel	1000	5.1 kg/unit	**217 072 000**
10	Long. member wheel arch cut-out 1246 x 50 x 80 x 4	Steel	1250	6.4 kg/unit	**217 071 000**
11	End member U 80 x 50 x 3	Steel	2205	8.6 kg/unit	**217 027 221**
Not shown	Connecting profile door to rear frame L 92 x 70 x 4	Steel	1500	7.4 kg/unit	**217 037 000**
12	Corner reinforcement right and left	Steel	296	1.1 kg/unit	**217 084 000**
Not shown	Set of fasteners	–	–	–	**217 098 000**
13*	Universal chassis assembly plate (fixed)	Steel	–	0.51 kg/unit	**217 094 000**
14*	Universal chassis bracket (variable)	Steel	–	0.44 kg/unit	**217 089 000**

* The illustration is not shown in the exploded drawing (see page 9).

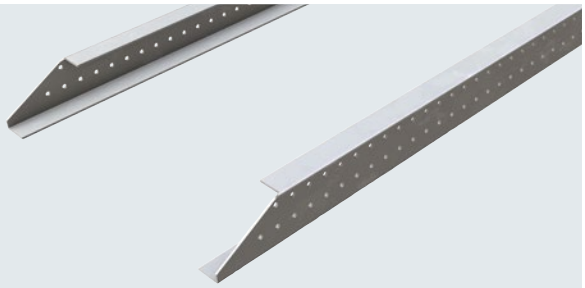
Features at a glance

WIHAG®Van Frame base frames for a gross vehicle weight of 7.5 to 12 tonnes.

Dimensions

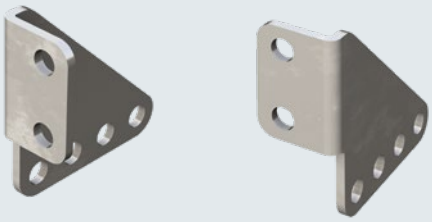
Description	Dimensions [mm]
Cross-member height	80
Maximum overall length[1]	7810
Overall width	2505
Longitudinal member dimensions	100 x 60 x 5 x 7800
	120 x 60 x 6 x 7800
	140 x 70 x 6 x 7800
Longitudinal member spacing	844 - 866
Cross-member spacing [2]	500 / 625
Framework assembly for rear wheel arch cut-out	1000 / 1250

Individual parts



Items 1 / 2
Longitudinal member, symmetrical
in heights of 100, 120 or 140 mm

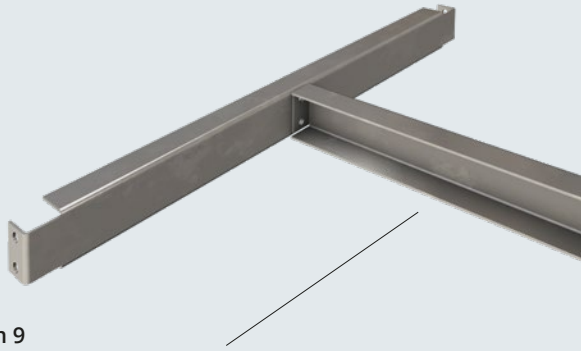
Item 3
Steel cross-member
80 mm high



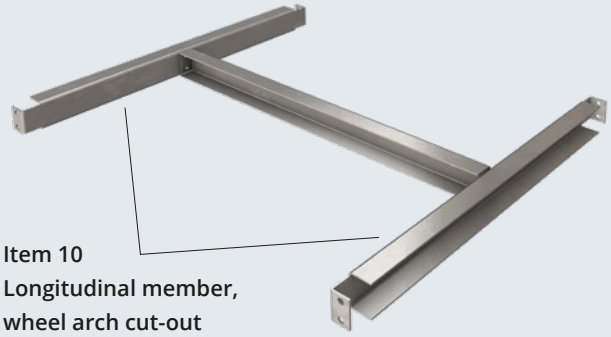
Items 4a / 4b
Connecting bracket for steel cross-member
(right and left)

Items 6 / 7 a / 7 b
Aux. longitudinal members for front and rear
For spacing of 500 or 625 mm (not shown), or auxiliary long. member for offset end cross-members, left or right side available

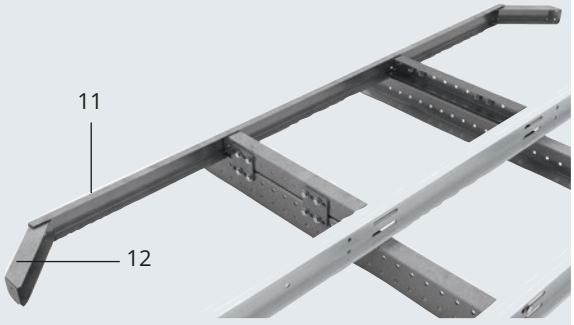
Item 8
Assembly plate



Item 9
Cross-member, wheel arch cut-out



Item 10
Longitudinal member, wheel arch cut-out
For 1000 or 1250 mm spacing



Items 11 and 12
End member (11) and corner reinforcement (12)

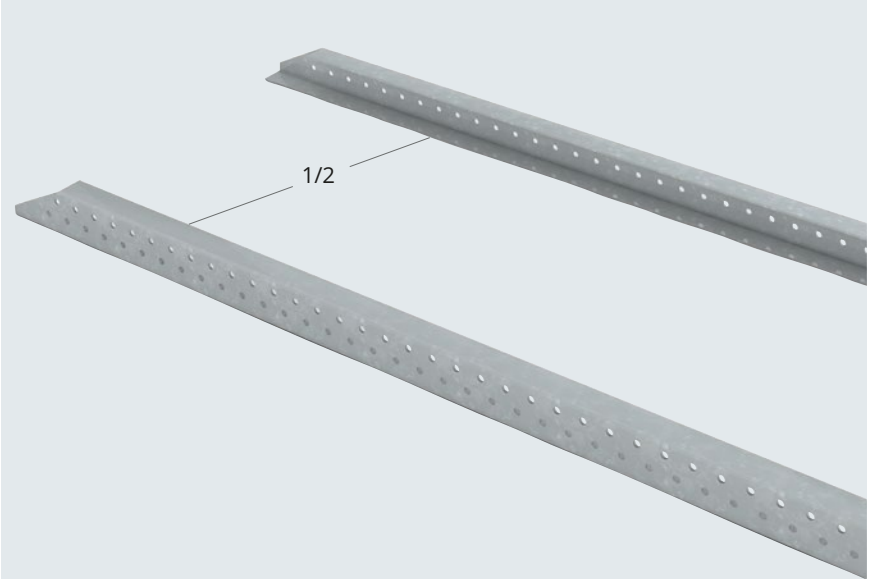
Individual parts

Item 13
Universal chassis assembly plate (fixed)

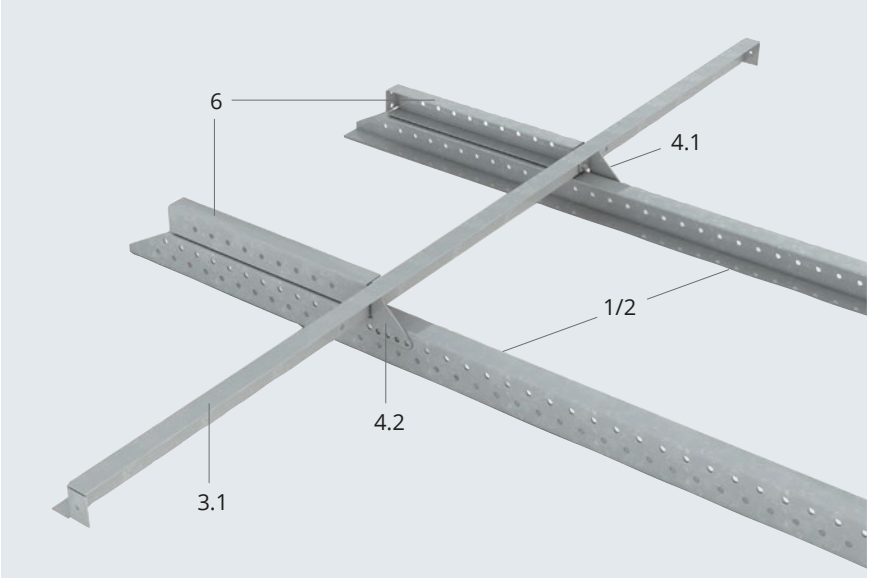
Item 14
Universal chassis bracket (variable)

Assembly instructions

To assemble, place the longitudinal members (Items 1/2) on assembly supports or directly on the chassis and align to fit the width of the chassis frame. The chamfers on the longitudinal members should be pointing downwards in the direction of travel.



Loosely bolt the steel cross-member (Item 3) to the front auxiliary longitudinal member (Item 6) and the mounting brackets (Items 4a/4b) and align to fit the width of the longitudinal member / chassis frame (Items 1/2). Depending on how the mounting brackets are arranged, longitudinal member / chassis frame widths of 844 – 866 mm can be achieved.



Assembly instructions

Attach the end member (Item 11) incl. corner reinforcement (Item 12) to the front auxiliary longitudinal members (Item 6) (e.g. using screw clamps) and align the components as shown in Fig. 2. Loosely bolt the assembly plates (Item 8) to the front auxiliary longitudinal members (Item 6).
Then loosely bolt the front auxiliary longitudinal members (Item 6) and the steel cross-member (3) to the longitudinal members (Items 1/2) using the assembly plates (Item 8) and the mounting brackets (Items 4a/4b).

Please note:
After completing the assembly work, fasten the end member (Item 11) to the side rave near the longitudinal member (Item 1/2).

When assembling and aligning the base assembly on the chassis, always follow the chassis manufacturer's assembly instructions.

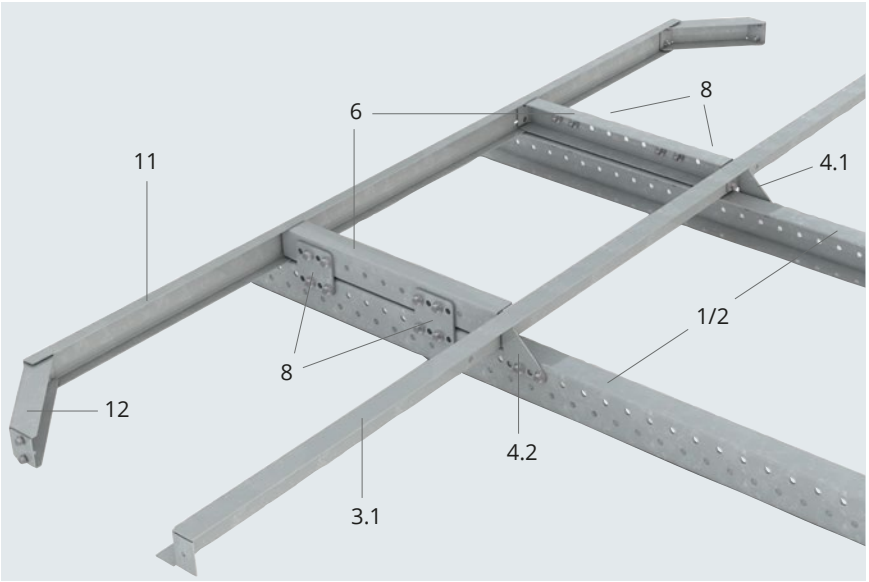
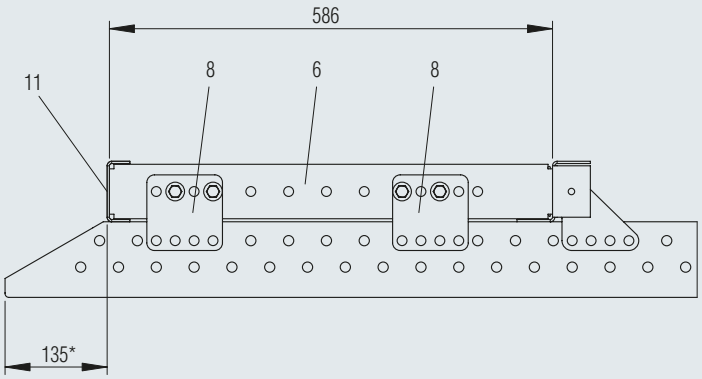


Fig. 2

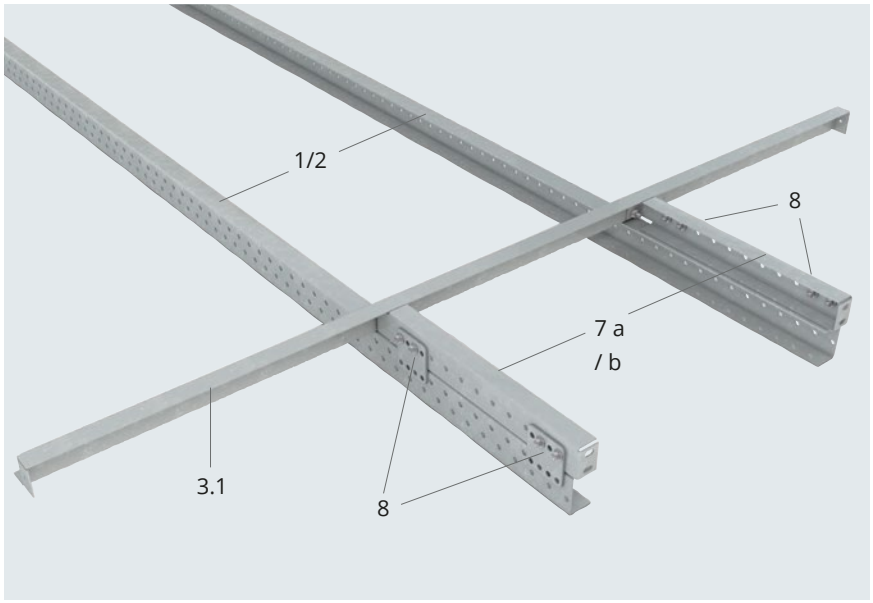


* If necessary, adjust the spacing between the front edge of the longitudinal member to the front edge of the auxiliary longitudinal member at 25 mm intervals starting from 135 mm.

Assembly instructions

Arrange and align the components as shown in Fig. 3 (rear frame installation). Loosely bolt the assembly plates (Item 8) to the rear auxiliary longitudinal members (Items 7 a / b).

Then loosely bolt the rear auxiliary longitudinal members (Items 7 a / b) to the longitudinal members (Items 1/2) using the assembly plates (Item 8).

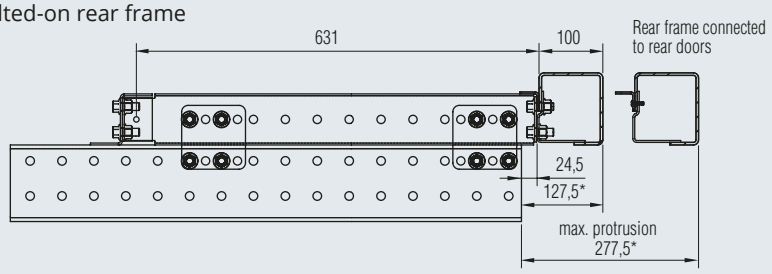


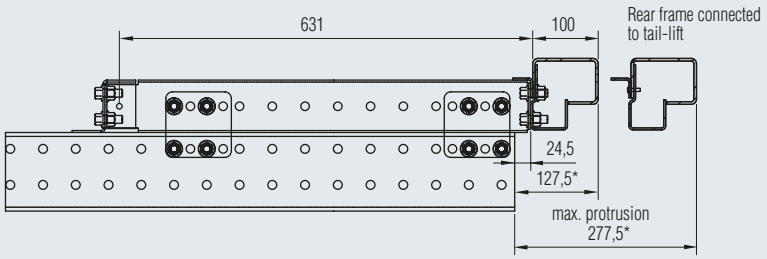
Assembly instructions

When assembling and aligning the base assembly on the chassis, always follow the chassis manufacturer's assembly instructions. If assembled professionally and correctly, the spacing between the inner edge of the floor recess and the centre of the 1st cross-member should measure approx. 625 mm on a welded-on rear frame and 631 mm on a bolted-on rear frame, including all tolerances.

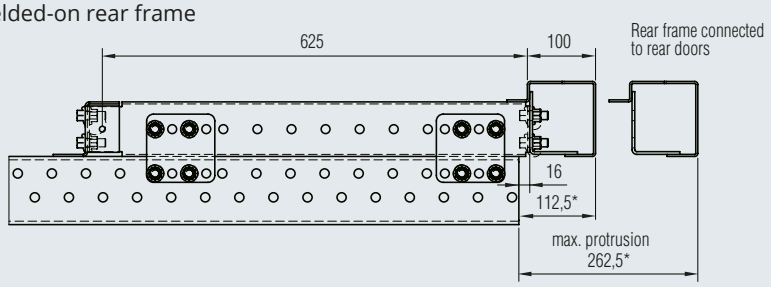
Fig. 3

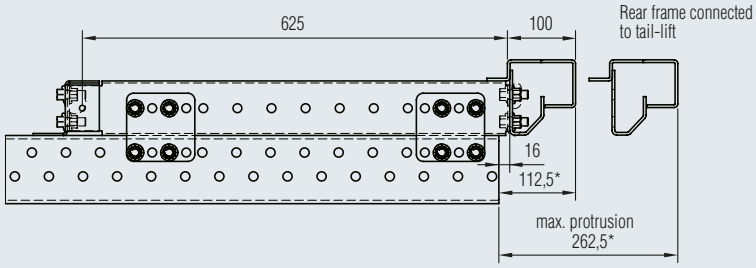
Bolted-on rear frame





Welded-on rear frame



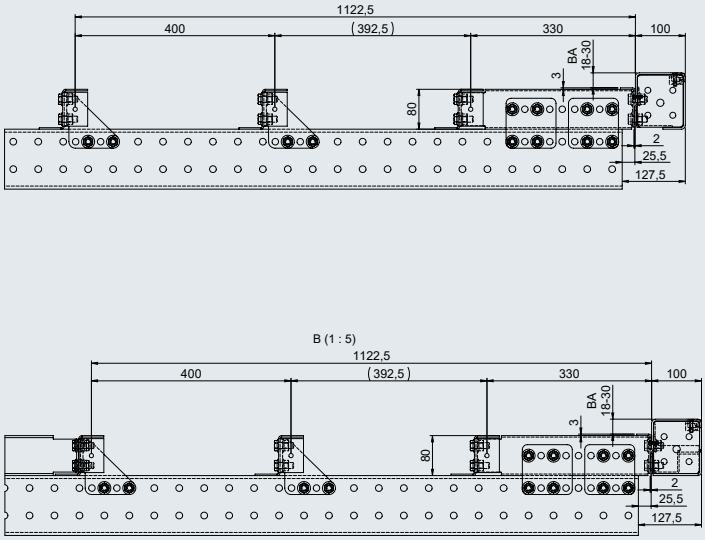


* Depending on the type of assembly involved, the protrusion will need to be amended in increments of 25 mm from 112.5 mm to no more than 262.5 mm for welded-on rear frames and 277.5 mm for bolted-on rear frames

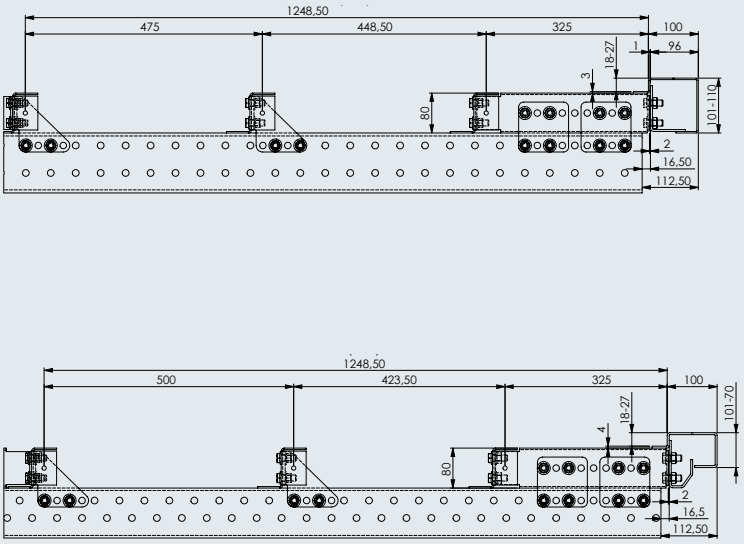
Assembly instructions

When assembling and aligning the base assembly on the chassis, always follow the chassis manufacturer's assembly instructions. If assembled professionally and correctly, the spacing between the inner edge of the floor recess and the centre of the 1st cross-member should measure approx. 325 mm on a welded-on rear frame and 330 mm on a bolted-on rear frame, including all tolerances.

Fig. 4
Bolted-on rear frame

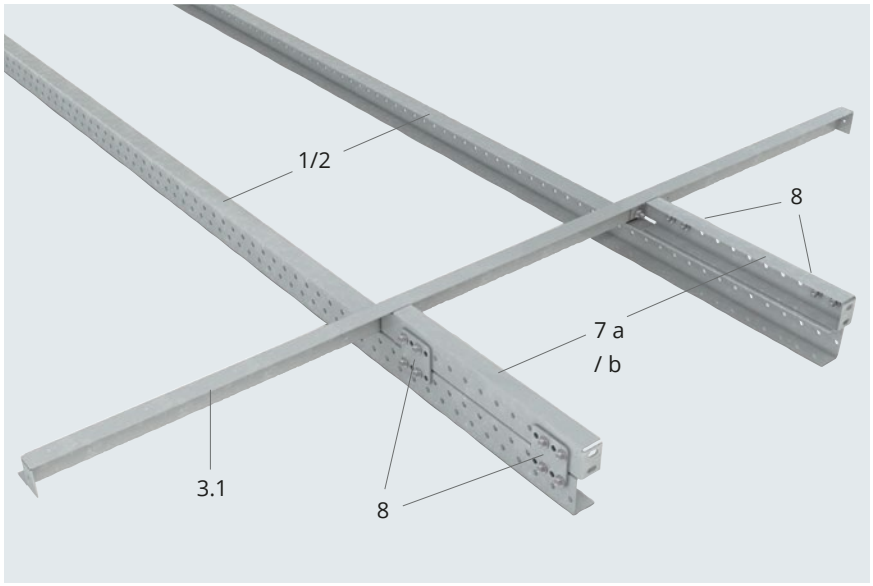


Welded-on rear frame



Assembly instructions

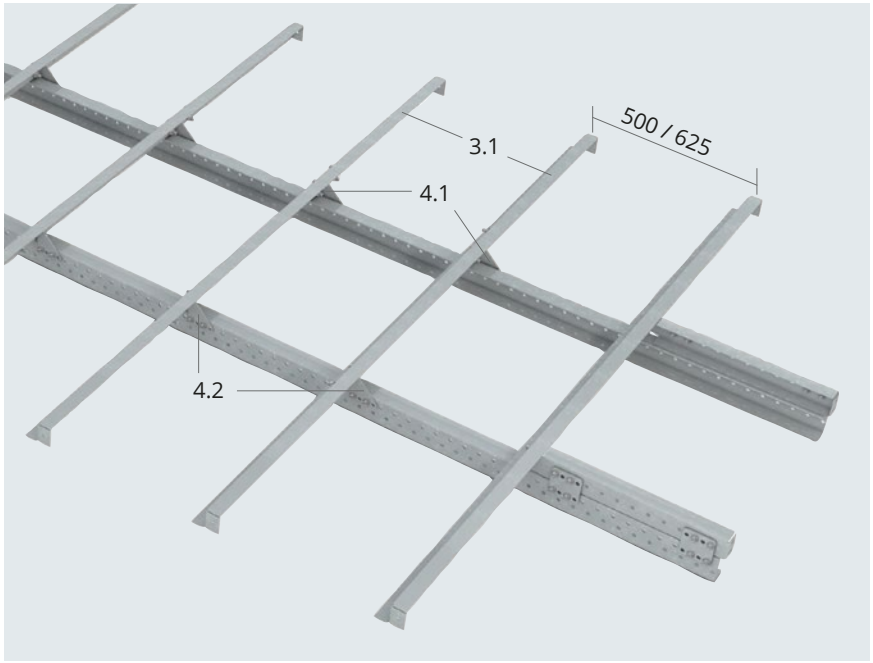
Loosely bolt the rear auxiliary longitudinal member (Item 7 a / b) to the longitudinal members (Items 1/2) using the assembly plates (Item 8).



Base assembly without wheel arch cut-out

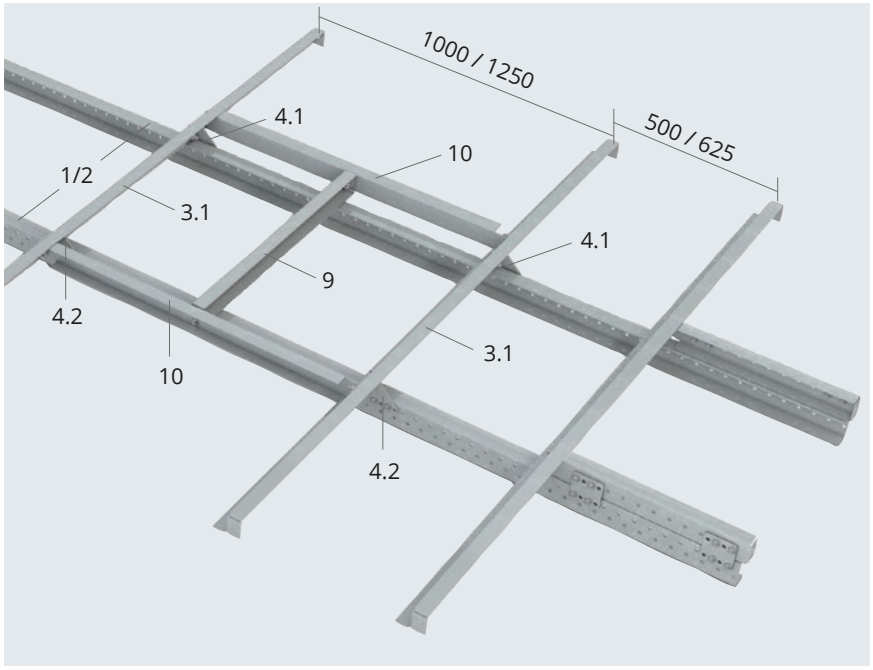
Once the rear components have been fitted, begin fitting the remaining cross-members. Depending on the gross vehicle weight in question, the cross-member spacing must not exceed 625 mm (on vehicles up to 7.5 t) or 500 mm (on vehicles up to 12 t). When arranging the cross-members, always take the position of the rear axle into account.

Loosely bolt the cross-members (Item 3) to the mounting brackets (Items 4a/4b) and the longitudinal members (Items 1/2) and align to the width of the longitudinal members / chassis frame.



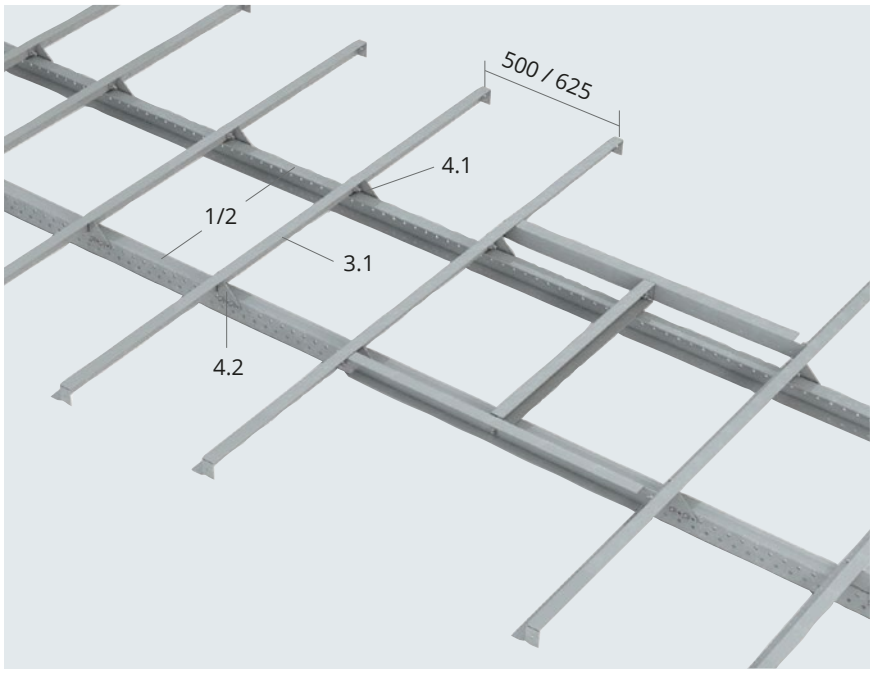
Base assembly with wheel arch cut-out
Once the rear components have been fitted, begin fitting the wheel arch cut-out (Items 9/10). When aligning the cross-members (Item 3), always take the position of the rear axle and the plate joints into account. Depending on the type of wheel arch cut-out being fitted, the cross-members (Item 3) will need to be spaced accordingly: 1000 mm or 1250 mm.

Loosely bolt the cross-members for the wheel arch cut-out (Item 9) to the longitudinal members for the wheel arch cut-out (Item 10) and the cross-members (Item 3). Align the mounting brackets (Items 4a/4b) to the width of the longitudinal members / chassis frame and loosely bolt to the cross-members (Item 3) and the longitudinal members (Items 1/2).



Once the components for the wheel arch cut-out have been fitted, begin fitting the remaining cross-members. Depending on the gross vehicle weight in question, the cross-member spacing must not exceed 625 mm (on vehicles up to 7.5 t) or 500 mm (on vehicles up to 12 t). When arranging the cross-members, always take the position of the rear axle into account.

Loosely bolt the cross-members (Item 3) to the mounting brackets (Items 4a/4b) and the longitudinal members (Items 1/2) and align to the width of the longitudinal members / chassis frame.



Base assembly for truck chassis

Check that the base assembly dimensions are correct, the components are perpendicular and the cross-members are correctly positioned. Then tighten all fasteners to the required torque (see technical data on page 3).

After mounting the body
Fasten the corner reinforcements to the end member and to the bulkhead rave. Fasten the corner reinforcements to the side wall rave.

Please follow the fastening procedure!
1. Fasten the bulkhead to the end member
2. Fasten the corner reinforcements to the side walls

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