



Nutzfahrzeuge

Body assembly guidelines Volkswagen Nutzfahrzeuge

The Crafter

The following pages contain technical guidelines for custom body manufacturers/ coachwork specialists for construction and assembly of custom body-related parts and conversions.

The body assembly guidelines should be strictly adhered to if modifications are made with the intention of doing so.

Included in the Volkswagen body assembly guidelines are also the body dimension plans for our commercial vehicles Crafter, Transporter T4 and T5, Caddy and LT. These can be installed in 3 formats (TIF, DXF, IGES) for CAD programs and as PDF files.

Advice: If further technical queries about the series production vehicle arise over and beyond these guidelines, please contact your local conversion expert at your importer.

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2.1 Weights/axle loads

The weights and axle loads (permissible/unladen) for the Crafter body variants - panel van, vehicle chassis with cab/crew cab can be gleaned from the illustrations in the download area. For the chassis with wind deflector (without roof and partition), a minimum weight of approx. 50 kg should be applied compared to the chassis with cab.

Warning:

In order to assure sufficient steerability of the vehicle, the minimum front axle load must be 25% of the overall weight.

The unladen weight specifications refer to the standard vehicle equipment (inc. driver, tools and filled tank). Weight tolerances of + 5% are permissible, as per German road traffic regulations, and should be taken into consideration where appropriate.

If special equipment is installed, the unladen weight will be increased. If necessary, the final unladen weight should be checked on a weighbridge or similar.

	Wheelb.	GVW	Perm. FA	Perm. RA	Unl. w.	Unl. w. FA	Unl. w. RA	Payload
Box van	3250	3000	1650	1800	1948	1205	743	1052
Box van	3665	3000	1650	1800	2016	1231	785	984
High roof box van	3665	3000	1650/1800	1800	2052	1242	810	948
Box van	3250	3500	1650/1800	2250	1961	1215	746	1539
Box van	3665	3500	1650/1800	2250	2029	1241	788	1471
High roof box van	3665	3500	1650/1800	2250	2065	1252	813	1435
High roof box van	4325	3500	1650/1800	2250	2199	1291	908	1301
High roof box van long	4325	3500	1650/1800	2250	2251	1282	969	1249
Super-high roof box van	3665	3500	1650/1800	2250	2101	1263	838	1399
Super-high roof box van	4325	3500	1650/1800	2250	2226	1299	927	1274
Super-high roof box van long	4325	3500	1650/1800	2250	2279	1288	991	1221
Supersingle box van	3665	4600	1850/2000	3200	2309	1336	973	2291
High roof Supersingle box van	3665	4600	1850/2000	3200	2345	1347	998	2255
High roof Supersingle box van	4325	4600	1850/2000	3200	2511	1406	1105	2089
Super-high roof box van Supersingle	3665	4600	1850/2000	3200	2381	1358	1023	2219
Super-high roof box van Supersingle	4325	4600	1850/2000	3200	2538	1414	1124	2062
Super-high roof box van long Supersingle	4325	4600	1850/2000	3200	2586	1408	1178	2014
Box van	3665	5000	1850/2000	3500	2309	1336	973	2691
High roof box van	3665	5000	1850/2000	3500	2345	1347	998	2655
High roof box van	4325	5000	1850/2000	3500	2511	1406	1105	2489
High roof box van long	4325	5000	1850/2000	3500	2558	1402	1156	2442
Super-high roof box van	3665	5000	1850/2000	3500	2381	1358	1023	2619

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Super-high roof box van	4325	5000	1850/2000	3500	2538	1414	1124	2462
Super-high roof box van long	4325	5000	1850/2000	3500	2586	1408	1178	2414

	Wheelb.	GVW	Perm. FA	Perm. RA	Unl. w.	Unl. w. FA	Unl. w. RA	Payload
Chassis with cab	3250	3000	1650	1800	1695	1191	504	1305
Chassis with cab	3665	3000	1650	1800	1712	1217	495	1288
Chassis with cab	3250	3500	1650/1800	2250	1708	1201	507	1792
Chassis with cab	3665	3500	1650/1800	2250	1725	1227	498	1775
Chassis with cab	4325	3500	1650/1800	2250	1755	1278	477	1745
Chassis with Supersingle cab	3665	4600	1850/2000	3200	1950	1297	653	2650
Chassis with Supersingle cab	4325	4600	1850/2000	3200	1988	1358	630	2612
Chassis with cab	3665	5000	1850/2000	3500	1950	1297	653	3050
Chassis with cab	4325	5000	1850/2000	3500	1988	1358	630	3012
Chassis TC	3250	3000	1650	1800	1893	1289	604	1107
Chassis TC	3665	3000	1650	1800	1915	1331	584	1085
Chassis TC	3250	3500	1650/1800	2250	1906	1299	607	1594
Chassis TC	3665	3500	1650/1800	2250	1928	1341	587	1572
Chassis TC	4325	3500	1800	2250	1956	1400	556	1544
Chassis TC Supersingle	3665	4600	1850/2000	3200	2171	1435	736	2429
Chassis TC Supersingle	4325	4600	1850/2000	3200	2185	1522	663	2415
Chassis TC	3665	5000	1850/2000	3500	2171	1435	736	2829
Chassis TC	4325	5000	1850/2000	3500	2185	1522	663	2815

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2.2 One-sided weight distribution

Under no circumstances should

- permissible **overall weight**
- permissible **front axle load**
- permissible **rear axle load** be exceeded.

When drawing up plans for custom body parts/conversions, ensure that one-sided weight distribution is avoided, in particular with permanently fitted custom body parts. If this cannot be avoided, the one-sided load should not result in a greater difference between the wheel pairs of max. 8%.

Warning:

Observe tyre load capability!

Example:

Perm. axle load	2.000 kg
Theor. wheel load, left/right	1.000/1.000 kg
4% of this wheel load	40 kg
Perm. wheel load distr.	1.040 kg/960 kg

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2.3 Dimensions

The dimensions of the vehicle chassis can be gleaned from the diagrams. To support your custom conversion plans, illustrations and diagrams are available in the "download" area.

Selection of tyre sizes other than those stipulated for standard use can affect the vehicle and chassis frame height above ground level. Please take this fact into consideration in the planning phase.

Important note:

- The minimum distance between cab and body must be at least 50 mm.

2.3.1 Custom body exterior lengths and vehicle overhangs

for vehicle chassis with single/crew cab:

- [Translate to English:] Zu der Überhanglänge des Fahrzeugs gehört der Gesamtüberhang bezogen auf die Hinterachse einschließlich Rahmenüberhangsverlängerung sowie Auf- und Anbauten.
- Bei der der Auslegung der Überhänge sind die gesetzlichen Vorgaben für den Unterfahrschutz zu beachten, ggf. ist die Position nach hinten zu versetzen.
- Die Befestigung muß der des Grundfahrzeuges entsprechen.
- Nach allen Arbeiten am Fahrzeug ist der Korrosionsschutz und die Lackierung nach den Richtlinien des Fahrzeugherstellers auszuführen. (Siehe hierzu die technische Hinweise im Reparaturleitfaden!)
- Werden die folgenden Überhanglängen sowie die maximale Hinterachslast eingehalten, bleibt die ursprüngliche Anhängelast erhalten und die Funktion des ESP wird nicht beeinflusst.
- Wird der Fahrzeugüberhang verändert, ist dies nur unter Berücksichtigung der zulässigen Achslasten und der Mindest-Vorderachslast möglich.
- Bei Fahrzeugen mit geschlossenem Aufbau (Kombi- oder Kastenwagen) ist eine Überhangverlängerung nur nach Rücksprache der zulässigen Abteilung der VW AG zulässig.
- Der Rahmenüberhang ist entsprechend zu verstärken.
- Die zulässigen Achslasten, die zulässigen Schwerpunktlagen und die Mindest-Vorderachslast ist in allen Belastungszuständen einzuhalten (siehe 2.3.1.)

[Translate to English:] **Die maximalen Fahrzeugüberhanglängen betragen:**

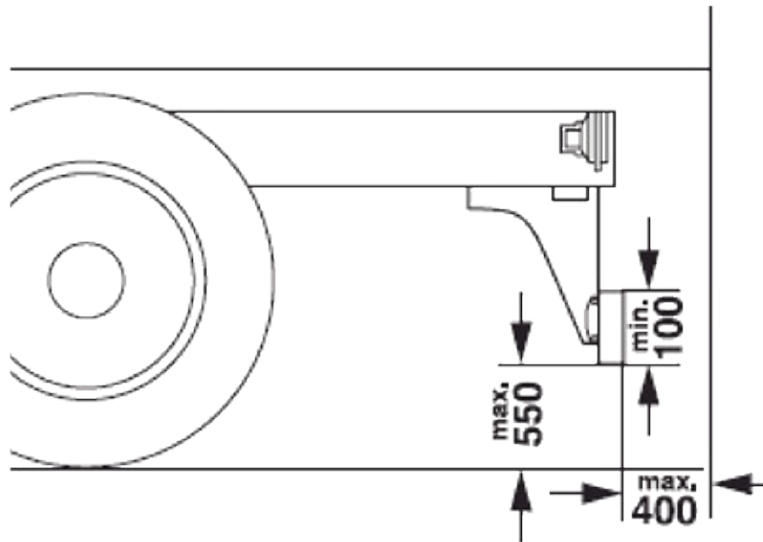
Wheelbase 1 [mm]	Overhang x [mm]
3250	1650
3665	1850
4325	2200

On vehicle chassis with crew cab, larger vehicle overhangs (than recommended) are only permissible after consultation with Volkswagen AG.

For the custom body length recommendations, adherence to the minimum front axle load and the permissible axle loads should be checked by means of a load distribution calculation.

2.3.2 Rear underride protection

The underride protection installed at the rear on the chassis cab and double cab complies with EC directive 70/221/EEC.



Rear underride protection (only chassis cab or double cab) side view.

If the overhang is extended, ensure that the position of the underride protection is restored as required in the directive.

Attachment of the underride protection is to be the same as on the series production vehicle.

Unavoidable modifications to the underride protection are to be agreed with the inspection authority responsible.

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2.4 Passenger compartment (Kombi)

2-seater bench in 1st row of the passenger compartment

Function

On the left hand side in driving direction is a 2-seater bench in the first row of the passenger compartment installed. This 2-seater bench allows the loading up to the passenger seat in driver cabin. Both seats of the bench are equipped with 3 point seat belts.

The remaining load area behind the seat bench has the following dimensions:

3.250 mm wheelbase: 1.658 mm

3.665 mm wheelbase: 2.323 mm

4.325 mm wheelbase: 3.358 mm

4.325 mm wheelbase: 3.758 mm

3-seater bench narrow in 1st row of the passenger compartment

Function

On the left hand side in driving direction is a 3-seater bench in the first row of the passenger compartment installed. All three seats of the bench are equipped with 3 point seat belts.

The remaining load area behind the seat bench has the following dimensions:

3.250 mm wheelbase: 1.658 mm

3.665 mm wheelbase: 2.323 mm

4.325 mm wheelbase: 3.358 mm

4.325 mm wheelbase: 3.758 mm

2-seater bench in 2nd row of the passenger compartment

Function

On the left hand side in driving direction is a 2-seater bench in the second row of the passenger compartment installed. Both seats of the bench are equipped with 3 point seat belts.

The remaining load area behind the seat bench has the following dimensions:

3.250 mm wheelbase: 800 mm

3.665 mm wheelbase: 1.465 mm

4.325 mm wheelbase: 2.500 mm

4.325 mm wheelbase: 2.900 mm

3-seater bench in 2nd row of the passenger compartment

Function

On the second row of the passenger compartment is a 3-seater bench installed. All three seats of the bench are equipped with 3 point seat belts.

The remaining load area behind the seat bench has the following dimensions:

3.250 mm wheelbase: 800 mm

3.665 mm wheelbase: 1.465 mm

4.325 mm wheelbase: 2.500 mm

4.325 mm wheelbase: 2.900 mm

3-seater bench in 3rd row of the passenger compartment

Function

On the third row of the passenger compartment is a 3-seater bench installed. All three seats of the bench are equipped with 3 point seat belts.

The remaining load area behind the seat bench has the following dimensions:

3.665 mm wheelbase: 607 mm

4.325 mm wheelbase: 1.642 mm

4.325 mm wheelbase: 2.042 mm

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2.5 Rahmenhöhen

Maße von der Fahrbahn bis zur Oberkante des Rahmens im beladenen und unbeladenen Zustand

lfd. Nr.	Fahrzeug-Typ	Radstand [mm]		Maß Fahrbahn bis Oberkante Fahrgestellrahmen			
				vorn (gleich hinter dem Fahrerhaus)		hinten (am Rahmenende)	
				beladen	unbeladen	beladen	unbeladen
				B [mm]	B [mm]	D [mm]	D [mm]
1	Crafter Fahrgestell 3,5t	kurz	3250	610	665	595	740
		mittel	3665	610	660	595	740
		lang	4325	610	650	595	745
2	Crafter Doppelkabine 3,5t	kurz	3250	610	680	595	735
		mittel	3665	610	670	595	735
		lang	4325	610	660	595	740
3	Crafter Fahrgestell 4,6t (mit Supersingle Reifen!)	mittel	3665	670	735	690	875
		lang	4325	670	720	690	875
4	Crafter Doppelkabine 4,6t (mit Supersingle Reifen!)	mittel	3665	675	760	690	880
		lang	4325	675	740	690	880
5	Crafter Fahrgestell 5,0t	mittel	3665	650	720	660	840
		lang	4325	650	705	660	840
6	Crafter Doppelkabine 5,0t	mittel	3665	650	740	660	845
		lang	4325	650	725	660	845

Hinweis: Die unbeladenen Werte sind theoretische Werte, berechnet ausgehend von einem mit max. Achslasten beladenen Fahrzeug.

In der Praxis können die vom Band rollenden Fahrgestelle am Heck etwas höher als berechnet stehen, da die Federn und Dämpfer noch nie belastet wurden.

Bei den blau und fett markierten Werten (4,6 t und 5 t Fahrgestelle) wird der Ausfederweg durch den Stoßdämpfer begrenzt!

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