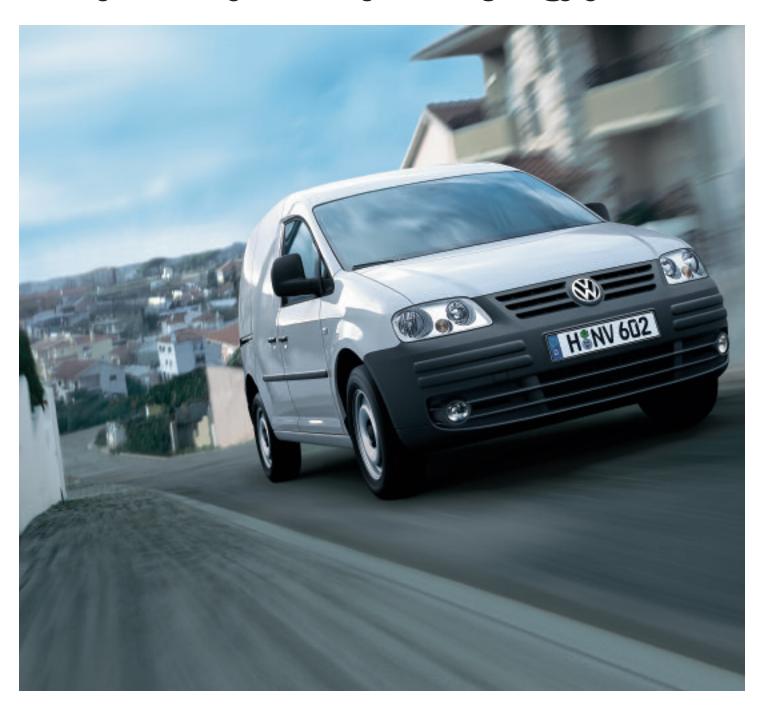


# Huj €&h{orj kx&m{oj krotky&k gjj€





## Body assembly guidelines Volkswagen Nutzfahrzeuge

## The Caddy

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.

Volkswagen Nutzfahrzeuge Brieffach 2963 Postfach 21 05 80 D - 30405 Hannover Fax. +49 (0)511 / 7 98 - 85 00

Online contact: http://www.vwn-aufbaurichtlinien.de/de/kontaktformular

Note: Subject to errors and technical amendments. The electronic version of the body guidelines is the decisive source of up-to-date data on body guidelines <a href="http://www.vwn-aufbaurichtlinien.de">http://www.vwn-aufbaurichtlinien.de</a>

Data status October 2009



#### 1.1 Body builder guidelines, inquiries

The body builder guidelines define the requirements for custom body builders and equipment fitters designing and mounting bodies or performing conversions to base vehicles of the Volkswagen Commercial Vehicles brand.

The body builder guidelines must be strictly adhered to when performing any modifications to the vehicle.

Ensure that no modification adversely affects the functional reliability and safety of the running gear, the body or the electric system. Modifications must only be performed by qualified specialists and in accordance with the generally acknowledged rules of the automotive industry.

Prerequisites for modifications to used vehicles: The vehicle must be in a good overall condition, i.e. structural parts such as longitudinal and cross members, pillars etc. must not be corroded to such an extent that structural stability might be adversely affected.

Vehicles whose modifications might affect the validity of general certificate of roadworthiness must be presented to an authorised testing centre for approval. It is recommended to clarify in advance with the relevant authority whether approval is required.

When **inquiring** about planned modifications, please enclose two sets of design drawings of the complete scope of the modification, including weights, centre of gravity and dimensions, which also clearly show how the body is attached to the chassis. Please use the online contact form:

http://www.vwn-aufbaurichtlinien.de/de/kontaktformular

Please also provide information about the intended operating conditions of the vehicle. If bodies, installations or conversions comply with the present guidelines, no additional approval by Volkswagen AG is required for the presentation of the vehicle at the relevant authority examining roadworthiness.

The work safety regulations of the trade association and the EU machine directive apply.

When making modifications to vehicles, all corresponding and applicable legal regulations, rules, laws and directives must be observed.



#### 1.2 Warranty and product liability of the body builder

The body builder's or fitter's warranty conditions apply to the body builder's or fitter's scope of supply. Therefore, warranty claims associated with complaints to this scope of supply cannot be made under the warranty conditions applicable to Volkswagen Commercial Vehicles.

Volkswagen vehicles delivered after 01. January 2005 are covered by a 2-year warranty without mileage limitation for the flawless condition of the product (Volkswagen warranty).

Defects of bodies, installations and conversions provided by third parties as well as defects of the vehicle caused by the said bodies, installations or conversions are excluded from the Volkswagen warranty and also from the Volkswagen paint and body warranty. This also applies to accessories which were not installed and/or supplied by the vehicle manufacturer.

The body builder or fitter is solely responsible for the design and assembly of bodies and the execution of conversions.

All conversions must be documented by the body builder or fitter in the service schedule provided with every Volkswagen vehicle.

Due to the multitude of conversions and diversity of operating conditions, the information provided by Volkswagen AG is subject to the reservation that modified vehicles are not tested by Volkswagen AG. Modifications may affect the properties of the vehicle

## For reasons of liability, the body builders or fitters must provide the following information in writing to their customers:

"Due to the modifications\* to your Volkswagen Commercial Vehicles base vehicle, the properties of your base vehicle may have changed.

Please understand that Volkswagen AG does not assume any liability for any negative effects resulting from the modifications\* to the vehicle."

\* At this point, the term "modification" may be substituted by a more precise description of the work performed, e.g. by "camping equipment installation", "wheelbase extension", "box body".

In individual cases, Volkswagen AG reserves the right to demand proof of the information being passed on to the customer.

No general legal entitlement for the approval of a body modification exists, even if such approval was previously granted.

Bodies, installations or conversions complying with the present guidelines do not require additional approval by Volkswagen AG to be presented at the authorised examining body.



### 1.3 Recommendations for vehicle storage

Extended storage times cannot always be avoided. The following measures are recommended to ensure that vehicle quality is not affected by long-term storage:

At vehicle delivery:

- Fill tank
- Do not park the vehicle under trees, poles; etc.
- Open all ventilation flaps, set blower to maximum speed
- · Disconnect battery(ies)
- Remove dirt, snow and moisture from vehicle (footwell)
- · Close windows, doors, front lid, rear lid and sunroof
- Put manual gearbox into 1st gear or lever of automatic gearbox into park position. Do not engange reverse gear.
   Do not apply the parking brake.
- Remove the windscreen wiper bags and prop up the wiper arm using a foam pad, remove any loose protective film. ("Aero wipers": remove and store in suitable location inside vehicle).
- Check tyre pressures; increase to 4.5 bar for commercial vehicles, if required.

Check vehicles weekly for contamination by aggressive media (e.g. bird droppings, industrial dusts) and clean, if required.

Check battery open-circuit voltage every three months. Open-circuit voltage means the voltage of the disconnected battery after a minimum storage period of 12 hours. Recharge battery in due time before it reaches an open-circuit voltage of 12.4 volt ('magic eye' changes from green to black). Batteries with an open-circuit voltage of less than 11.6 volt are in state of exhaustive discharge and should be disposed of soon.

Batteries must be recharged only with current-controlled and voltage-limited chargers. A maximum charging voltage of 14.4 volt must not be exceeded.

It is recommended to check the tyre inflation pressure every three months and to increase it to 4.5 bars for commercial vehicles, if required.

Reconnect battery negative lead(s) before recommissioning the vehicle.



#### 1.4 Compliance with environmental rules and regulations

Fitters of accessories and body builders must ensure that they comply with all applicable environmental rules and regulations, especially EU directive 2000/53/EC concerning end-of-life vehicles and EU directive 2003/11/EC relating to restrictions on the marketing and use of certain dangerous substances and preparations.

The vehicle owner must keep all assembly documentation concerning the modification and hand them over together with the vehicle to the dismantler. This ensures that modified vehicles are processed in compliance with environmental rules and regulations at the end of their lifecycle.



#### 1.5 Recommendations for inspection, maintenance and repair

Maintenance instructions or service schedules outlining inspection and servicing work should be provided for the modifications performed by the body builder or accessories fitter. These instructions or schedules must include the maintenance and inspection intervals as well as the required operating fluids and materials and the spare parts. Parts and components with a limited service life which must be checked in regular intervals to ensure service reliability and timely replacement must be explicitly stated.

This should be supported by a repair manual including tightening torques, settings and tolerances as well as other relevant specifications. Special tools, including their source of supply, must also be stated.

The manual must also state which type of work must be performed only by the body builders and accessories fitters or their authorised workshops.

If the body builders or accessory fitter's scope of supply includes electric, electronic or mechatronic, hydraulic or pneumatic systems, circuit diagrams and diagnosis routines or similar documentation facilitating a systematic search for faults must be provided.



#### 1.6 Accident prevention

Body builders must ensure that the fitted components, conversions, bodies and modifications comply with applicable legal rules and regulations as well as all regulations regarding work safety and accident prevention. All safety rules and the information material provided by accident insurance providers must be observed.

All technically feasible measures must be taken to prevent unsafe operation.

Country-specific laws, directives and approval regulations must be observed.

The body builder or device or equipment manufacturer is responsible for the compliance with these laws, rules and regulations.

For further information about commercial freight traffic in the Federal Republic of Germany please contact:

Berufsgenossenschaft für Fahrzeughaltung Fachausschuss "Verkehr" Sachgebiet "Fahrzeuge"

Ottenser Hauptstraße 54 22765 Hamburg, Germany

Internet: <a href="www.bgf.de">www.bgf.de</a>
E-Mail: <a href="mailto:info@bgf.de">info@bgf.de</a>



#### 1.7 Design advantages of the Caddy

#### 1.7.1 Caddy short wheelbase

- 741 kg pure payload on panel van for all engines apart from natural gas and Blue Motion
- 701 kg pure payload on panel van for natural gas vehicles and 670 kg for Blue Motion
- Up to 712 kg payload on 5-seater Kombi (depending on engine) Caddy KR
- Up to 685 kg payload on 7-seater Kombi (depending on engine) Caddy KR
- Front-wheel drive
- 15" / 16" running gear
- McPherson strut suspension at front, rigid axle with leaf springs at rear
- Up to 3.2 m<sup>2</sup> load capacity
- Loading width 117cm
- Full and level cargo bed, loading sill protection
- Disc brakes at front and rear
- Powerful and frugal range of engines from Golf segment
- Highest towing capacities in vehicle class up to 1500 kg
- Onboard electronics with CAN bus technology
- Speed-dependent, electromechanical and hydraulic-mechanically controlled steering depending on engine

The weights indicated refer to the minimum unladen weight with driver. If standard or custom equipment is installed, the payload is reduced and the unladen weight increased. The unladen weight should be checked on a weighbridge or similar.

#### 1.7.2 Caddy long wheelbase

- 813kg load capacity on panel van version for all other engine types
- 807kg pure payload on panel van for 1.9 l/77 kW TDI AG6 engine
- Up to 626 kg payload on 5-seater Kombi (depending on engine) Caddy LR
- Up to 693 kg payload on 7-seater Kombi (depending on engine) Caddy LR
- Front-wheel drive
- 15" / 16" running gear
- McPherson strut suspension at front, rigid axle with leaf springs at rear
- Up to 4.2 m<sup>2</sup> load capacity
- Loading width 117cm
- Full and level cargo bed, loading sill protection
- Disc brakes at front and rear
- Powerful and frugal range of engines from Golf segment
- Highest towing capacities in vehicle class up to 1500 kg
- Onboard electronics with CAN bus technology
- Speed-dependent, hydraulic-mechanically controlled steering

The weights indicated refer to the minimum unladen weight with driver. If standard or custom equipment is installed, the payload is increased and the unladen weight increased. The unladen weight should be checked on a weighbridge or similar.



## Body assembly guidelines Volkswagen Nutzfahrzeuge

## The Caddy

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.

Volkswagen Nutzfahrzeuge Brieffach 2963 Postfach 21 05 80 D - 30405 Hannover Fax. +49 (0)511 / 7 98 - 85 00

Online contact: http://www.vwn-aufbaurichtlinien.de/de/kontaktformular

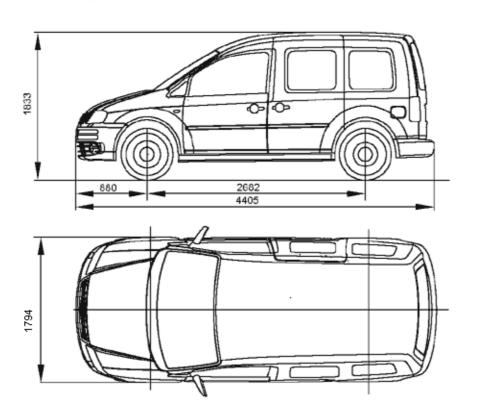
Note: Subject to errors and technical amendments. The electronic version of the body guidelines is the decisive source of up-to-date data on body guidelines <a href="http://www.vwn-aufbaurichtlinien.de">http://www.vwn-aufbaurichtlinien.de</a>

Data status October 2009



## 2.1 Permissible weights/unladen weights

## 2.1.1 Caddy short wheelbase



Weights pan	el van l	KR							
Engine	Seats	Running gear	Wheels/tyres	Max. perm. weight	Perm. front axle	Perm. rear axle	Unladen weight	Of which on front axle	Of which on rear axle
1.4l / 59kW (16V) MPI	1-2	15"	15"	2092	1050	1200	1351	782	569
1.6l / 75kW (16V) MPI	1-2	15"	15"	2124	1050	1200	1383	814	569
2.0l / 80kW natural gas	1-2	15"	15"	2270	1090	1250	1569	869	700
2.0l / 51kW SDI	1-2	15"	15"	2162	1050	1230	1421	849	572
1.9l / 77kW TDI M5	1-2	15"	15"	2198	1065	1230	1457	892	565
	1-2	15"	15"	2130	1110	1100	1460	895	565



1.9I / 77kW TDI M5 Blue Motion									
1.9l / 77kW TDI AG6	1-2	15"	15"	2230	1090	1230	1489	923	566
1.9I / 77kW TDI SG6/ 4-motion	1-2	15"	15"	2280	1140	1230	1549	942	607
1.9l / 55kW TDI SG	1-2	15"	15"	2189	1065	1230	1448	900	548
2.0I / 103kW TDI SG	1-2	16"	16"	2222	1075	1230	1481	913	568

Weights Koml	oi KR	_							
Engine	Seats	Running gear	Wheels/tyres	Max. perm. weight	Perm. front axle	Perm. rear axle	Unladen weight	Of which on front axle	Of which on rear axle
1.4l / 59kW (16V) MPI	2-5	15"	15"	2000	1000	1200	1388	799	589
1.4l / 59kW (16V) MPI	2-7	15"	15"	2160	1000	1200	1388	799	589
1.6l / 75kW (16V) MPI	2-5	15"	15"	2176	1000	1200	1412	819	593
1.6l / 75kW (16V) MPI	2-7	15"	15"	2176	1000	1200	1412	819	593
2.0l / 80kW natural gas	2-5	16"	16"	2186	1030	1200	1608	871	737
2.0l / 80kW natural gas	2-7	16"	16"	2267	1030	1250	1608	871	737
2.0l / 51kW SDI	2-5	16"	16"	2035	1035	1200	1439	852	587
2.0l / 51kW SDI	2-7	16"	16"	2220	1035	1200	1439	852	587
1.9l / 55kW TDI	2-5	15"	15"	2035	1065	1200	1474	884	590
1.9l / 55kW TDI	2-7	15"	15"	2250	1065	1200	1474	884	590
1.9l / 77kW TDI M5	2-5	15"	15"	2251	1065	1200	1480	888	592
1.9l / 77kW TDI M5	2-7	15"	15"	2251	1065	1200	1480	888	592
1.9I / 77kW TDI M5 BlueMotion	2-5	15"	15"	2185	1110	1100	1484	892	592
1.9l / 77kW TDI AG6	2-5	15"	15"	2280	1095	1200	1524	930	594



1.9l / 77kW TDI AG6	·/_/	15"	15"	2280	1095	1200	1524	930	594
1.9I / 77kW TDI SG6/ 4-motion	2-5	15"	15"	2280	1110	1200	1577	937	640
1.9I / 77kW TDI SG6/ 4-motion	2-7	15"	15"	2280	1110	1200	1577	937	640
2.0l / 103kW TDI SG	2-5	16"	16"	2280	1090	1200	1512	919	593
2.0I / 103kW TDI SG	2-7	16"	16"	2280	1090	1200	1512	919	593

The weights indicated refer to series production vehicles with driver. If special equipment is installed, the unladen weight will be increased. The final unladen weight should be checked on a weighbridge or similar.

## 2.1.1.2 Gewichte Kombi KR (PKW)

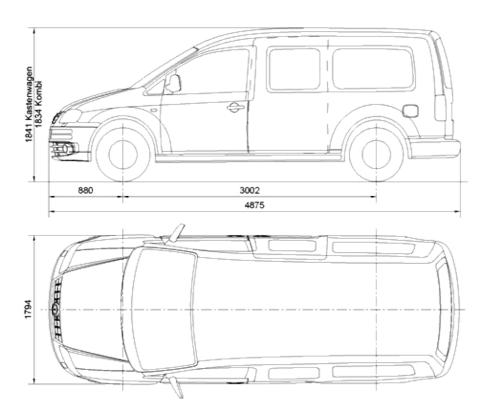
Motor	Motor Getriebe PR-Nr.		Sitze	Zu	II. Gewichte	[kg]	Leergewich [l	t inkl. I (g]	ahrer	Nutz- last
				Gesamt- gewicht [kg]	Achslast vorn (VA)	Achslast hinten (HA)	Gesamt- gewicht (min.)	VA [kg]	HA [kg]	max. [kg]
1,4I/ 59kW Otto	SG	0J2	2-5	2000	1000	1200	1382	789	593	618
		0J2	2-7	2145	1000	1200	1382	789	593	763
1,6I/ 75kW Otto	SG	0J1 (+2MH*)	2-5	2000	1000	1200	1402	809	593	598
		0J2+ 2MH*	2-5	2020	1000	1100	1402	809	593	618
		0J2	2-5	2176	1000	1200	1402	809	593	774
		0J2	2-7	2176	1000	1200	1402	809	593	774
1,9I/ 55kW TDI	SG	0J1 (+2MH*)	2-5	2000	1065	1200	1473	883	590	527
		0J2+ 2MH*	2-5	2020	1065	1100	1473	883	590	547
		0J2	2-5	2035	1065	1200	1473	883	590	562
		0J2	2-7	2245	1065	1200	1473	883	590	772
1,9I/ 77kW TDI	DSG	0J1	2-5	2000	1095	1200	1525	930	595	475
		0J2+ 2MH*	2-5	2120	1095	1100	1525	930	595	595
		0J2+ 2MH*	2-5 2-7	2280	1095	1200	1525	930	595	755
	SG	0J1 (+2MH*)	2-5	2000	1065	1200	1486	893	593	514
		0J2+ 2MH*	2-5	2085	1065	1100	1486	893	593	599
		0J2+ 2MD**	2-5	2185	1110	1100	1482	893	589	703
		0J2	2-5	2251	1065	1200	1486	893	593	765
		0J2	2-7	2251	1065	1200	1486	893	593	765
1,9I/ 77kW TDI	SG	0J2	2-5	2280	1110	1200	1578	938	640	702
4MOTION		0J2	2-7	2280	1110	1200	1577	937	640	703



2,0I/ 103kW TDI	SG	0J1 0J2+ 2MH*	2-5 2-5	2000 2110	1090 1090	1200 1100	1509 1509	913 913	596 596	491 601
		0J2	2-5 2-7	2280	1090	1200	1509	913	596	771
2,0I/ 51kW SDI	SG	0J2 0J2	2-5 2-7	2035 2210	1035 1035	1200 1200	1441 1441	848 848	593 593	594 769
2,01/ 77kW TDI	SG	0J1 0J2+ 2MH* 0J2	2-5 2-5 2-5 2-7	2000 2110 2280	1090 1090 1090	1200 1100 1200	1509 1509 1509	913 913 913	596 596 596	491 601 771
2,0I/ 80kW Otto		0J2 0J2	2-7 2-5 2-7	2186 2267	1030 1030	1200 1250	1590 1590	837 837	753 753	596 677

Stand: 25.08.2009

### 2.1.2 Caddy long wheelbase



Weights panel van LR

<sup>\* 2</sup>MH = Tieferlegung

<sup>\*\* 2</sup>MD = BlueMotion



Engine	Seats	Wheels/tyres	Max. perm. weight	Perm. front axle	Perm. rear axle	Unladen weight	Of which on front axle	Of which on rear axle
1.6l / 75kW petrol MG	1-/	15"	2245	1070	1300	1432	850	582
1.9I / 77kW TDI M5	1-2	15"	2315	1110	1300	1502	929	573
1.9I / 77kW TDI AG6	1-2	15"	2350	1170	1300	1543	969	574
2.01 / 103kW TDI MG	1-2	16"	2342	1165	1300	1529	947	582

Weights Kor	mbi LR							
Engine	Seats	Wheels/tyres	Max. perm. weight	Perm. front axle	Perm. rear axle	Unladen weight	Of which on front axle	Of which on rear axle
1.6l / 75kW petrol MG	2-5	15"	2264	1120	1230	1479	854	625
1.6l / 75kW petrol MG	2-7	16"	2264	1120	1250	1479	854	625
1.9l / 77kW TDI M5	2-5	15"	2280	1180	1230	1546	932	614
1.9l / 77kW TDI M5	2-7	16"	2335	1180	1250	1546	932	614
1.9l / 77kW TDI AG6	2-5	15"	2280	1200	1230	1584	975	609
1.9l / 77kW TDI AG6	2-7	16"	2370	1200	1250	1584	975	609
2.01 / 103kW TDI MG	2-5	16"	2360	1200	1250	1588	964	624
2.01 / 103kW TDI MG	2-7	16"	2360	1200	1250	1588	964	624

The weights indicated refer to series production vehicles with driver. If special equipment is installed, the unladen weight will be increased. The final unladen weight should be checked on a weighbridge or similar.

### 2.1.2.2 Gewichte Kombi LR (PKW)



				Gesamt- gewicht [kg]	Achslast vorn (VA)	Achslast hinten (HA)	Gesamt- gewicht (min.)	VA [kg]	HA [kg]	
1,6I/ 75kW Otto S0	G	0J2	2-5	2264	1120	1230	1459	847	612	805
		0J5	2-5	2315	1120	1300	1459	847	612	856
		0J2	2-7	2264	1120	1250	1459	846	613	805
		0J5	2-7	2275	1120	1300	1459	846	613	816
<b>1,9I/ 77kW TDI</b> DS	SG	0J2	2-5	2280	1200	1230	1578	967	611	702
		0J5	2-5	2415	1200	1300	1578	967	611	837
		0J2	2-7	2370	1200	1250	1578	966	612	792
		0J5	2-7	2390	1200	1300	1578	966	612	812
SC	G	0J2	2-5	2280	1180	1230	1542	930	612	738
		0J5	2-5	2380	1180	1300	1542	930	612	838
		0J2	2-7	2335	1180	1250	1542	930	612	793
		0J5	2-7	2355	1180	1300	1542	930	612	813
1,9I/ 77kW TDI SC	G	0J2	2-5	2280	1205	1200	1636	978	658	644
<b>4MOTION</b>		0J2	2-7	2415	1205	1250	1636	978	658	779
2,0I/ 103kW TDI S0	G	0J5	2-5	2410	1200	1300	1568	953	615	842
		0J2	2-5 2-7	2360	1200	1250	1568	953	615	792
		0J5	2-7	2380	1200	1300	1568	952	616	812
2,01/ 77kW TDI SC	G	0J5	2-5	2410	1200	1300	1568	953	615	842
		0J2	2-5 2-7	2360	1200	1250	1568	953	615	792
		0J5	2-7	2380	1200	1300	1568	952	616	812
2,0I/ 80kW Otto S0	G	0J2	2-5	2280	1150	1250	1708	896	812	572
EcoFuel Stand: 25.08.2009		0J2	2-7	2375	1150	1300	1708	895	813	667



#### 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 installations, ensure that one-sided weight distribution is avoided, in particular with permanently installed installations.

If this cannot be avoided, the one-sided maximum wheel load must not deviate by more than 4% of the theoretical maximum wheel load. The permissible axle load must be adhered to.

#### Example:

Perm. axle load 1.200 kg
Theor. wheel load, left/right 600 kg/600 kg
4% of this wheel load 24 kg

Perm. wheel load distr. left/right 576 kg/624 kg

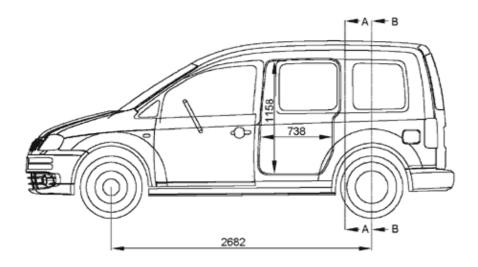
To guarantee an acceptable level of steerability of the vehicle and to assure satisfactory road handling in all load conditions, the minimum front axle load should be 780 kg.

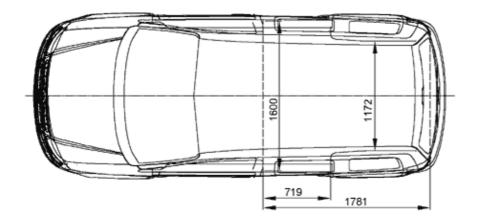


## 2.3 Innenmaßzeichnung

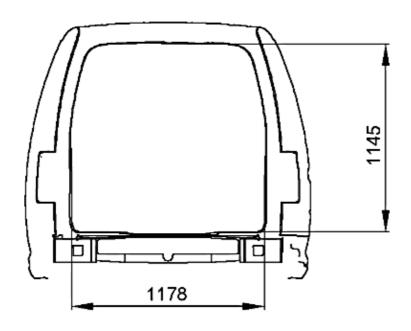
### 2.3 Interior dimensions diagram

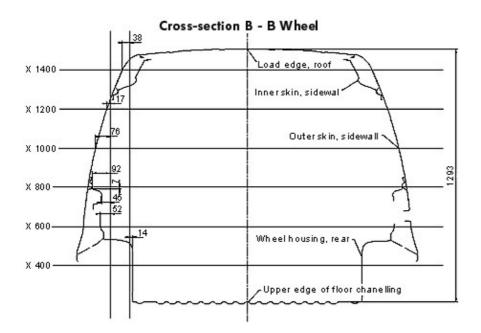
(reduced, Diagram no. 2K0 000 011 in scale of 1:10 and 1:5)



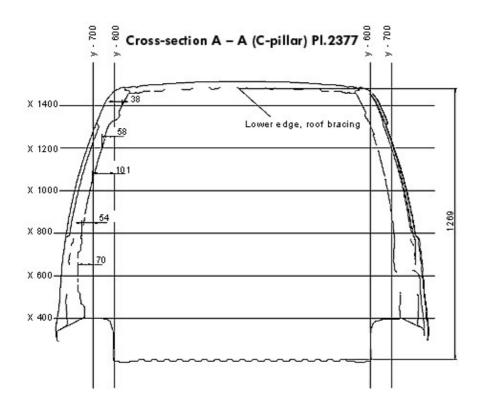






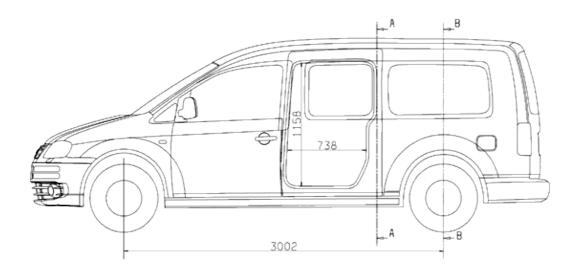




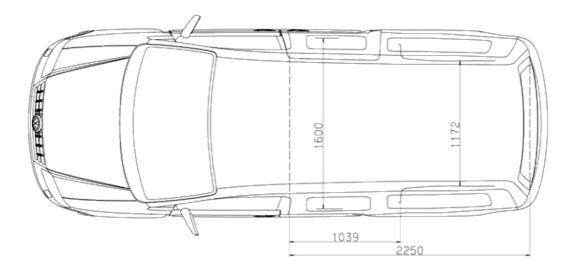


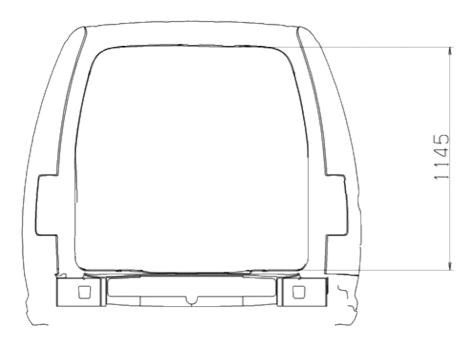
### 2.3.2 Caddy LR

(Verkleinerung, Zeichnungs-Nr. 2K0.000.011.A im Maßstab 1:10 und 1:5)



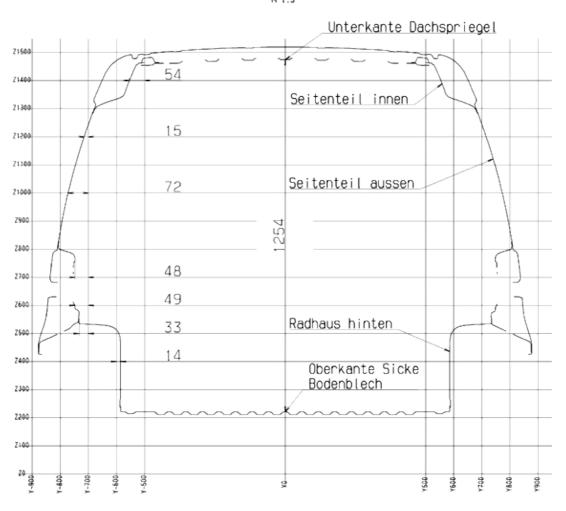






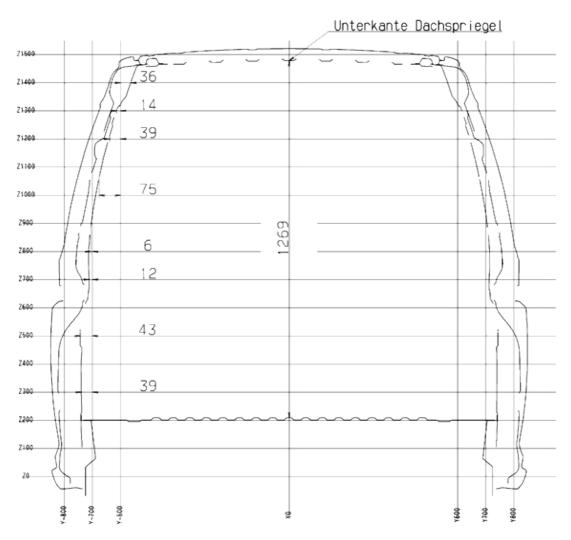


#### Schnitt B-B Radhaus hinten M 1:5





Schnitt A-A (Säule C) Pl. 2377 M 1:5





## Body assembly guidelines Volkswagen Nutzfahrzeuge

## The Caddy

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.

Volkswagen Nutzfahrzeuge Brieffach 2963 Postfach 21 05 80 D - 30405 Hannover Fax. +49 (0)511 / 7 98 - 85 00

Online contact: http://www.vwn-aufbaurichtlinien.de/de/kontaktformular

Note: Subject to errors and technical amendments. The electronic version of the body guidelines is the decisive source of up-to-date data on body guidelines <a href="http://www.vwn-aufbaurichtlinien.de">http://www.vwn-aufbaurichtlinien.de</a>

Data status October 2009



#### 3.1 Roof racks, rear luggage racks / rear ladders

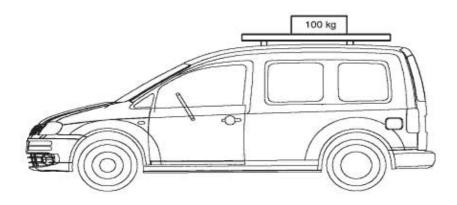
#### **Roof racks**

Roof loads increase the centre of gravity of the vehicle and lead to increase dynamic axle load displacement as well as vehicle tilting during cornering and where road surfaces are uneven. Road handling is considerably impaired. For this reason, roof loads should be avoided if at all possible.

Depending on the load distribution, at least 2 roof carriers are required, which should be mounted, if possible, in the pillar area.

On each side, there are 2 attachment points on the Caddy KR and 3 attachment points on the Caddy LR roof.

The roof load for the Caddy KR and LR is max. 100 kg.



#### Rear luggage carriers/rear ladders

The rear luggage carrier and rear ladder should be of a design that, when fitted, does not allow static or dynamic loads to affect the shock absorbers.

The load on the rear lid may not exceed max. 45 kg.



### 3.2 Trailer hitches/space allowance in accordance with DIN 74058

Only the trailer hitches authorised by the factory should be installed for towing. As an option, the following trailer hitches can be ordered from the factory:

#### Ball head coupling:

#### Caddy short wheelbase

a) Maximum towing capacity for fixed couplings

Vehicle type	Engine type	Braked [kg]	Unbraked [kg]
Panel van	Depending on engine type	1200-1500	660-750
	EcoFuel	1300	750
	BlueMotion	1500	730
Kombi	Depending on engine type	1040-1500	690-750
	EcoFuel	1200	750
	BlueMotion	No coupling!	

with 12% gradient rise (depending on engine type).

#### b) Maximum towing capacity for removal couplings

Vehicle type	Engine type	Braked [kg]	Unbraked [kg]
Kombi	Depending on engine type	1040-1500	690-750

as above but removal and lockable (Kombi only), not EcoFuel!

#### Caddy long wheelbase

#### a) Maximum towing capacity for fixed couplings

Vehicle type	Engine type	Braked [kg]	Unbraked [kg]
Panel van	Depending on engine type	1300-1500	710-750
Kombi	Depending on engine type	1040-1500	730-750

with 12% gradient rise (depending on engine type).

#### b) Maximum towing capacity for removal couplings

Vehicle type	Engine type	Braked [kg]	Unbraked [kg]
Kombi	Depending on engine type	1040-1500	690-750

as above but removal and lockable (Kombi only!)

The maximum drawbar load on the panel van is 80 kg. The permissible drawbar load on the Kombi is 75 kg.

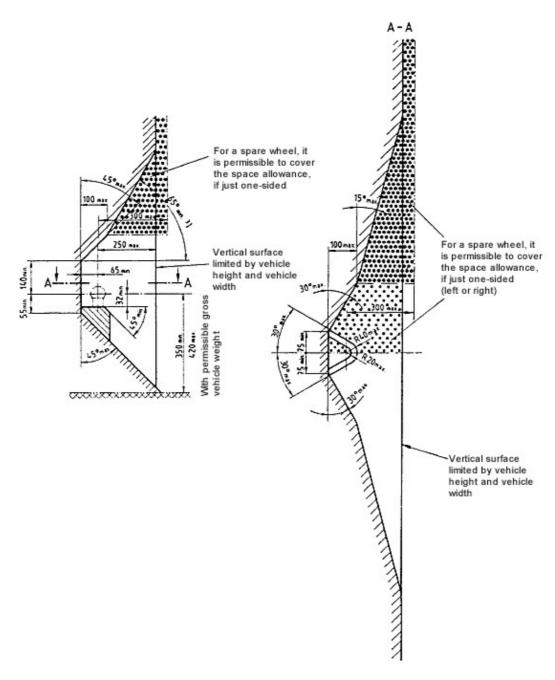
#### Space allowance in accordance with DIN 74058

Details not given are to be determined in accordance with the purpose.

#### Inspection

Inspection of the dimensions and angles should be carried out with suitable test instruments.







### 3.3 Preservation of vehicle battery for long periods out of use

If a vehicle is subjected to long periods out of use, the battery will be gradually discharged by electrical consumers (clock, tachograph, cigarette lighter or radio) and thereby permanently damaged.

To avoid this kind of damage, the wiring harness is separated by a connector in the factory and reconnected on vehicle delivery and handover.

Should vehicles be subjected to the same periods out of use at custom body manufacturers, the connector should be separated again.



### 3.4 Power take-off units

No provision has been made for power take-off from the gearbox.



### 3.5 Brake system

An operating permit has been granted for the vehicle brake systems. This permit becomes void if any changes to the brake system are made.

#### Modifications to braking system are not permitted!



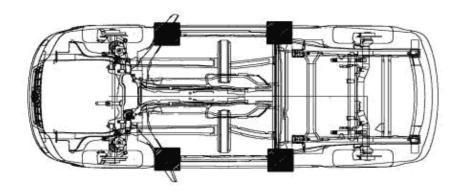
### 3.6 Lifting/jacking up vehicle

#### a) With lifting platforms

The vehicle may only be lifted at the allocated mounting points. See chapter in operating instructions on lifting vehicle! . Only 2-pillar lifting platforms (vehicle hoists) may be used.

#### b) With vehicle jack

For the jacking-up procedure and location of mounting points for the vehicle jack, see chapter in operating instructions on lifting vehicle!





### 3.7 Electromagnetic compatibility

In onboard electrical systems, electrical disturbances can be caused by individual consumers. At Volkswagen AG, the electronic components installed in the factory are checked in the vehicle for their electromagnetic compatibility.

If retrofitting electrical or electronic systems, their electromagnetic compatibility should also be checked.



## Body assembly guidelines Volkswagen Nutzfahrzeuge

## The Caddy

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.

Volkswagen Nutzfahrzeuge Brieffach 2963 Postfach 21 05 80 D - 30405 Hannover Fax. +49 (0)511 / 7 98 - 85 00

Online contact: http://www.vwn-aufbaurichtlinien.de/de/kontaktformular

Note: Subject to errors and technical amendments. The electronic version of the body guidelines is the decisive source of up-to-date data on body guidelines <a href="http://www.vwn-aufbaurichtlinien.de">http://www.vwn-aufbaurichtlinien.de</a>

Data status October 2009



#### 4.1 General notes on modifications to series production vehicles

The damping characteristic, braking system and steering should not be modified. Exceptions must be authorised by Volkswagen AG prior to these conversion measures being carried out.

For modifications to parts that generate noise (e.g. engine, tyres, exhaust, ...) carry out noise measurement in accordance with EC guidelines. The permissible values should not be ex-ceeded.

We recommend that custom body manufacturers/coachwork specialists include relevant service details and, if necessary, operating instructions for their scope of equipment.



### 4.2 Sidewall apertures

Body and platform form a self-supporting unit. Structural parts of this self-supporting unit should not be removed without replacement.

Partition walls do not have a structural function. Modifications other than complete removal are permissible.

Retrofitting of windows is difficult and expensive. The window requirement, therefore, should be specified before the vehicle leaves the factory (see supply programme).



### 4.3 Retrofitting of windows

If windows are to be retrofitted, the following work procedure is suggested:

- 1. Cut out the outer panel along the inner panel of the window surround and install the window.
- 2. If windows smaller than those shown below are desired, the following applies: The aperture should only ever be made between the pillars. No structural elements should be cut into or weakened. The aperture must be supported by a surrounding frame, which should be flush bonded to the adjacent structural elements.

The differences between Kombi/panel van in the window area are shown below.





### 4.4 Retrofitting of roof apertures

Roof apertures can be made between the roof bracing and the side roof frames. For details, see fig.4.4.1 and 4.4.2 below.

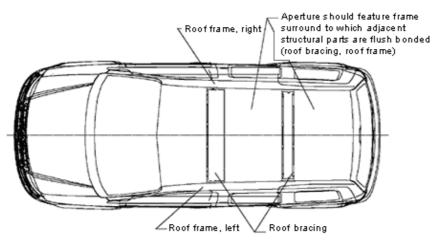


Fig.4.4.1: Caddy KR

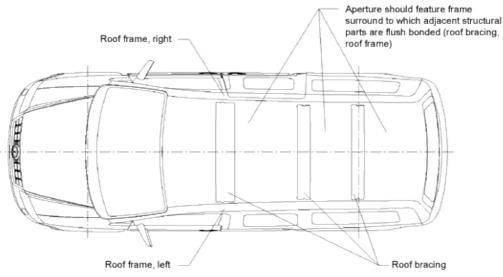


Fig.4.4.2: Caddy LR



#### 4.5 Forced ventilation

On panel vans with partitions, vent slits can be found in the partition and D-pillars.

On custom bodies, these vents should only be covered if new vents are provided, for exam-ple, in the cab doors.



## Body assembly guidelines Volkswagen Nutzfahrzeuge

## The Caddy

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.

Volkswagen Nutzfahrzeuge Brieffach 2963 Postfach 21 05 80 D - 30405 Hannover Fax. +49 (0)511 / 7 98 - 85 00

Online contact: http://www.vwn-aufbaurichtlinien.de/de/kontaktformular

Note: Subject to errors and technical amendments. The electronic version of the body guidelines is the decisive source of up-to-date data on body guidelines <a href="http://www.vwn-aufbaurichtlinien.de">http://www.vwn-aufbaurichtlinien.de</a>

Data status October 2009



#### 5.1 Panel van, short wheelbase

The individual dimensional drawings are in formats TIF, DXF, IGES and PDF. All files (except PDF) are packed in a zip archive. The files can be unpacked using Winzip (PC) or ZipIt (MAC).

Click on the link in question to save the selected file directly to your computer. You can then view and print out the dimension drawing using appropriate software (e.g. CAD system).



#### **Designation Internal dimensions drawing**

Wheelbase 2.682 mm

TIF Z.-Nr.2K0 000 011, 264 kB
DXF Z.-Nr.2K0 000 011, 588 kB
IGES Z.-Nr.2K0 000 011, 784 kB
PDF Z.-Nr.2K0 000 011, 248 kB



#### 5.2 Panel van, long wheelbase

The individual dimensional drawings are in formats TIF, DXF, IGES and PDF. All files (except PDF) are packed in a zip archive. The files can be unpacked using Winzip (PC) or ZipIt (MAC).

Click on the link in question to save the selected file directly to your computer. You can then view and print out the dimension drawing using appropriate software (e.g. CAD system).



#### **Designation Internal dimensions drawing**

Wheelbase 3.002 mm

TIF Z.-Nr.2K0 000 011 A, 112 kB
DXF Z.-Nr.2K0 000 011 A, 724 kB
IGES Z.-Nr.2K0 000 011 A, 568 kB
PDF Z.-Nr.2K0 000 011 A, 148 kB

# Body builder guidlines CUXXM

Body builder guidelines Subject to modifications Edition September 2008

Internet: www.volkswagen-nutzfahrzeuge.de

Consulting for body builders in Germany is available from the listed address.

Volkswagen Commercial Vehicles

Brieffach 2963
Postfach 21 05 80
D-30405 Hannover
Fax. +49 511 798 8500