Conversion guideline
Movano

PART 1 - 3

Edition: August 2018

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Conversions & LCV Engineering
Rüsselsheim / Germany

1 GENERAL POINTS, VEHICLE INFORMATION

1.1 BODYWORK RANGE

	L1 E1-P1	L2 E2-P1	L3 E3-P1	L3 E2-P2	L4 E3-P2
PANEL VAN FRONT WHEEL DRIVE 2.8t - 3.3t - 3.5t	H1-H2	H2-H3	H2-H3		
PANEL VAN REAR WHEEL DRIVE SW=3.5t / TW=4.5t				H2-H3 SW-TW	H2-H3 SW-TW
CHASSIS CAB FRONT WHEEL DRIVE 3.5t		H1	H1		
CHASSIS CAB REAR WHEEL DRIVE SW=3.5t / TW=4.5t		H1 SW-TW	H1	H1 TW	
DOUBLE-CAB CHASSIS FRONT-WHEEL DRIVE 3.5t		H1	H1		
DOUBLE-CAB CHASSIS REAR-WHEEL DRIVE SW=3.5t / TW=4.5t		H1 SW	H1 SW	H1 TW	
PLATFORM CAB FRONT-WHEEL DRIVE 3.5t	H1	H1-H2	H1-H2		

Glossary for „vehicle type“ in tables:

- E1 to E3: Wheelbase
  - E1 = 3,182mm
  - E2 = 3,682mm
  - E3 = 4,332mm
- H1 to H3: Roof height
  - H1 = general
  - H2 = average
  - H3 = high
- P1bis P2: Rear overhang
  - P1 = short
  - P2 = long
- TW: twin wheel on rear axle
- SW: single wheel on rear axle
- 2,8t / 3,3t / 3,5t / 4,5t: Permissible maximum weight

1.2 ENGINE/ GEARBOX RANGE

1.2.1 STANDARD VEHICLE

FRONT WHEEL DRIVE										
RANGE			ENGINE LEVEL	GENERATION ENGINE	ENGINE (Indices)	DEPOLL	GEAR BOX	KW	Start & Stop	
N1	M1	M2			M9T				WITH	WITH OUT
X	X		D1	GEN3	670	Euro 5	PF 6	74	X	X
X	X		D1	GEN3	676	Euro 4A	PF 6	74		X
X	X		D2	GEN3	670	Euro 5	PF 6	92	X	X
X	X		D2	GEN3	672	Euro 3B	PF 6	92		X
X	X		D2	GEN3	672	Euro 4A	PF 6	92		X
X	X		D2	GEN3	676	Euro 4A	PF 6	92		X
X	X		D2	GEN3	678	Euro 4A	PF 6	92		X
X	X	X	D3 Non-calibrated	GEN3	680	Euro 5	PF6/PA0	92		X
X	X		D3	GEN3	680	Euro 5	PF6/PA0	110		X

REAR-WHEEL DRIVE										
RANGE			ENGINE LEVEL	GENERATION ENGINE	ENGINE (Indices)	DEPOLL	GEAR BOX	KW	Start & Stop	
N1 PRS	TW	TW			M9T				WITH	WITH OUT
X			D1	GEN3	690	Euro 5A	ZF 4	74	X	X
X			D1	GEN3	692	Euro 5A	ZF 4	74		X
X			D2	GEN3	686	Euro 3B	ZF 4	92		X
X	X	X	D2	GEN3	686	Euro 4A	ZF 4	92		X
X		X	D2	GEN3	686	Euro 5A	ZF 4	92		X
X			D2	GEN3	690	Euro 5A	ZF 4	92	X	X
X			D2	GEN3	696	Euro 5A	ZF 4	92		X
X	X	X	D3 Non-calibrated	GEN3	698	Euro 5A	ZF 4	92		X
X	X	X	D3	GEN3	696	Euro 5A	ZF 4	110		X
X	X	X	D3	GEN3	698	Euro 5A	ZF 4	110		X

1.2.2 CO2-STEP 1

FRONT WHEEL DRIVE										
RANGE			ENGINE LEVEL	GENERATION ENGINE	ENGINE (Indices)	DEPOLL	GEAR BOX	KW	Start & Stop	
N1	M1	M2			M9T				WITH	WITH OUT
X	X		D1	GEN3	870	Euro 5	PF6	74	X	X
X	X		D2	GEN3	870	Euro 5	PF6	92	X	X
X	X		D2	GEN3	870	Euro 5	PA0	92		X
X	X		D2	GEN3	872	Euro 5	PF6	92	X	X
X	X		D2	GEN3	876	Euro 3 Inter	PF6	92		X
X	X		D2	GEN3	876	Euro 4 Inter	PF6	92		X
X	X		D2	GEN3	870	Euro 5	PA0	92		X
X	X		D2	GEN3	882	Euro 5	PF6	92		X
		X	D3 Non-calibrated	GEN3 TGV	880	Euro 5	PF6	92		X
		X	D3 Non-calibrated	GEN3 TGV	880	Euro 5	PA0	92		X
		X	D3	GEN3 TGV	880	Euro 5	PF6	110		X
X	X		D3	GEN3 TGV	880	Euro 5	PA0	110		X

REAR-WHEEL DRIVE										
RANGE			ENGINE LEVEL	GENERATION ENGINE	ENGINE (Indices)	DEPOLL	GEAR BOX	KW	Start & Stop	
N1 PRS	N1 PRJ	N2 PRJ			M9T				WITH	WITH OUT
X	X	X	D2	GEN3	892	Euro 4 Inter	ZF4	92		X
	X		D2	GEN3	892	Euro 3 Inter	ZF4	92		X
X	X	X	D3 Non-calibrated	GEN3 TGV	898	Euro 5	ZF4	92		X
X	X	X	D3 Non-calibrated	GEN3 TGV	896	Euro 5	ZF4	92		X
X	X	X	D3	GEN3 TGV	896	Euro 5	ZF4	110		X

1.2.3 CO2-STEP 2

FRONT WHEEL DRIVE										
RANGE			ENGINE LEVEL	GENERATION ENGINE	ENGINE (Indices)	DEPOLL	GEAR BOX	KW	Start & Stop	
N1	M1	M2			M9T				WITH	WITH OUT
X	X		D1	GEN3	870	Euro 5	PF6	81	X	X
X	X		D2	GEN3	870	Euro 5	PF6	92		X
X	X		D2	GEN3	870	Euro 5	PA0	92		X
X	X		D2	GEN3	876	Euro 3B	PF6	92		X
X	X		D2	GEN3	876	Euro 4A	PF6	92		X
		X	D3 Non-calibrated	GEN3 TGV	880	Euro 5	PF6	110		X
		X	D3 Non-calibrated	GEN3 TGV	880	Euro 5	PA0	110		X
X	X		D2+	GEN4 TT	702	Euro 5	PF6	100	X	
X	X		D3	GEN4 TT	702	Euro 5	PF6	120	X	

REAR-WHEEL DRIVE										
RANGE			ENGINE LEVEL	GENERATION ENGINE	ENGINE (Indices)	DEPOLL	GEAR BOX	KW	Start & Stop	
N1 PRS	M1 PRJ	N2 PRJ			M9T				WITH	WITH OUT
	X		D2	GEN3	892	Euro 3B	ZF4	92		X
X	X	X	D2	GEN3	892	Euro 4A	ZF4	92		X
X	X	X	D3 Non-calibrated	GEN3 TGV	898	Euro 5	ZF4	92		X
X	X	X	D3 Non-calibrated	GEN3 TGV	896	Euro 5	ZF4	92		X
	X	X	D3	GEN3 TGV	896	Euro 5	ZF4	110		X
	X	X	D3	GEN3 TGV	896	Euro 5	PA0	110		X
X	X	X	D2+	GEN4 TT	700	Euro 5	ZF4	100	X	
X	X	X	D3	GEN4 TT	700	Euro 5	ZF4	120	X	

1.2.4 SCR VEHICLE (EURO 6B AND EURO VI)

FRONT WHEEL DRIVE										
RANGE			ENGINE LEVEL	GENERATION ENGINE	ENGINE (Indices)	DEPOLL	GEAR BOX	KW	Start & Stop	
N1	M1	M2			M9T				WITH	WITH OUT
X	X		D1	GEN3	870	Euro 5	PF6	81	O	
X	X		D1	GEN4 ST	704	Euro 6	PF6	81	X	
X	X		D2	GEN3	876	Euro 4 INTER	PF6	92		X
X	X		D2	GEN3	870	Euro 3 INTER	PF6	92		X
X	X		D2-	GEN3	870	Euro 5	PF6	92		X
X	X		D2+	GEN 4 TT	702	Euro 5	PF6	100	X	
X			D2-	GEN4 ST	704	Euro 6	PF6	96		X
X	X		D2+	GEN 3	706	Euro 6	PF6	107	X	
X			D2+	GEN4 TT	708	Euro VI	PF6	107	X	
		X	D3 Non-calibrated	GEN3 TGV	880	Euro 5	PF6	92		X
		X	D2+	GEN3 TGV	880	Euro 5	PF6	110		X
X	X		D3	GEN4 TT	702	Euro 5	PF6	120	X	
X	X		D3	GEN4 TT	706	Euro 6	PF6	125	X	
X	X		D3	GEN4 TT	702	Euro 6	PA0	125	X	
X		X	D3	GEN4 TT	708	Euro VI	PF6	125	X	

REAR-WHEEL DRIVE										
RANGE			ENGINE LEVEL	GENERATION ENGINE	ENGINE (Indices)	DEPOLL	GEAR BOX	KW	Start& Stop	
N1 PRS	M1 PRJ	N2 PRJ			M9T				WITH	WITH OUT
X	X	X	D2	GEN3	892	Euro 4 INTER	ZF4	92		X
	X		D2	GEN3	892	Euro 3 INTER	ZF4	92		X
X	X	X	D2+	GEN4 TT	700	Euro 5	ZF4	100	X	
X	X	X	D2 Non-calibrated	GEN4 TT	710	Euro VI	ZF4	96		X
X	X	X	D2+	GEN4 TT	710	Euro VI	ZF4	107	X	
X	X	X	D3 Non-calibrated	GEN3 TGV	898	Euro 5	ZF4	92		X
X	X	X	D3	GEN4 TT	700	Euro 6	ZF4	120	X	
X	X	X	D3	GEN4 TT	710	Euro VI	ZF4	125	X	

GEN3 = Single Turbo
GEN3 TGV = GEN3 with Variable Geometry Turbo
ST = Single Turbo
TT = Twin Turbo

RS = Rear axle with single wheels
RJ = Rear axle with twin wheels
PF6 = 6 gearbox
PF0 = Easytronic gearbox

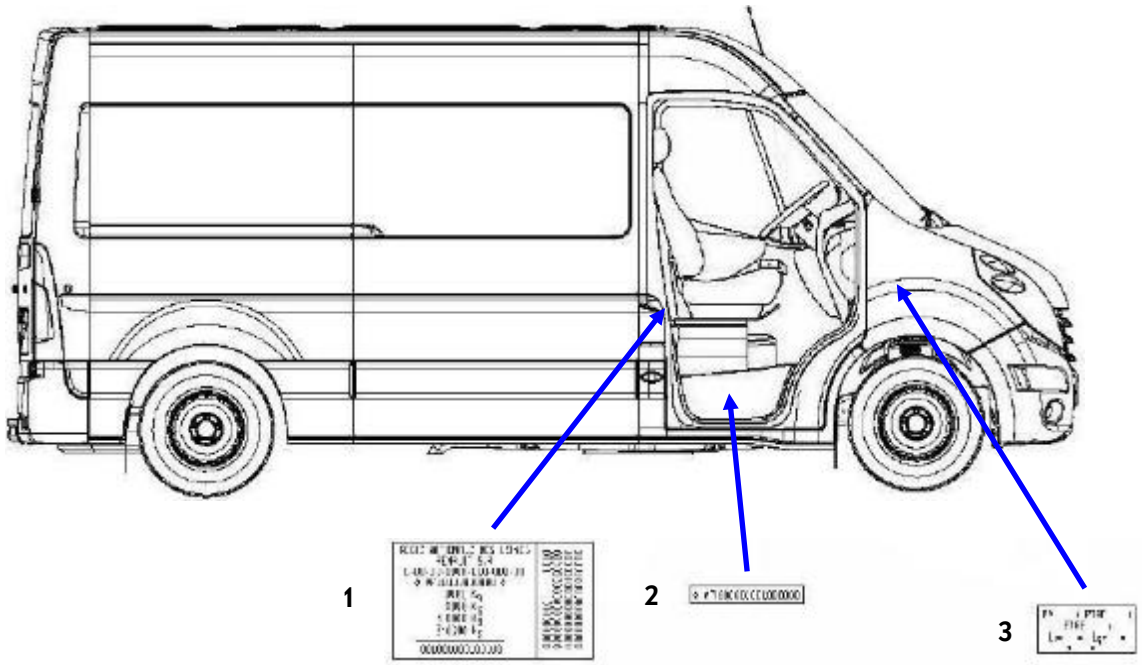
1.3 VEHICLE IDENTIFICATION

To view the chassis number marking (VIN), use a flat-ended tool (e.g. screwdriver) to lift one of the two flaps located above the right-hand cab side sill.

The manufacturer's plate is located on the right-hand cab door frame and has two parts:

- the regulatory ID plate,
- the oval plate showing data primarily intended to facilitate the ordering of spare parts.

Position of markings and plates



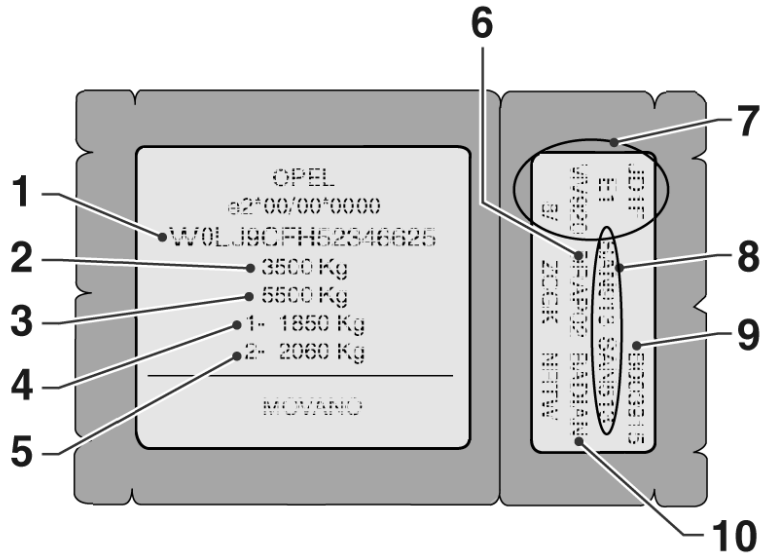
Pos.	Description
1	Manufacturer's plate
2	VIN marking
3	Weight and dimensions label

The vehicle manufacturer's plate must be replaced if it is damaged or moved, as is inevitable during conversion. This means you will have to order a new plate.

This request should be addressed to the country's Quality/ Service/ After-Sales departments.

Details of inscriptions

Manufacturer's plate



Information on identification plate [1]):

Pos.	Description
1	Vehicle identification number
2	Permissible gross vehicle weight rating
3	Permissible gross combination weight
4	Maximum permissible front axle load
5	Maximum permissible rear axle load
6	Trim code
7	Technical specifications of vehicle, including: Vehicle paint code, equipment level and vehicle type
8	Additional equipment specification
9	Fabrication number
10	Interior trim code

[1]) The VIN plate on your vehicle may differ from the illustration shown.

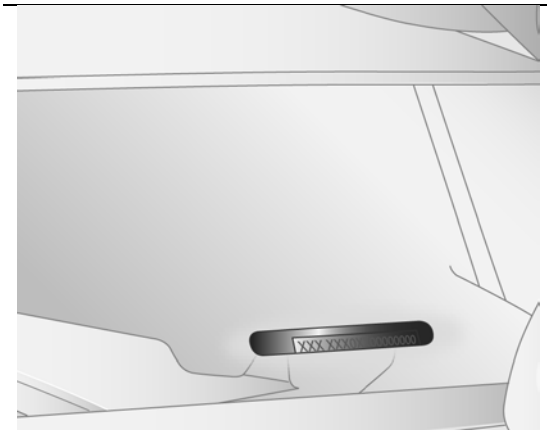
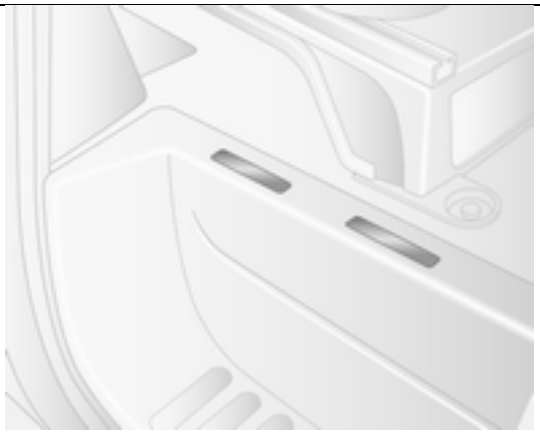
The combined total of front and rear axle loads must not exceed the permissible gross vehicle weight. For example, if the front axle is bearing its maximum permissible load, the rear axle can only bear a load that is equal to the gross vehicle weight minus the front axle load. The technical data is determined in accordance with European Community standards. We reserve the right to make modifications.

Specifications in the vehicle documents always have priority over those given in this manual.

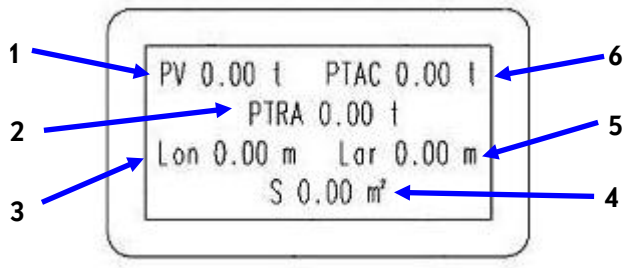
Stamped on a machined surface on the rear of the engine block or stamped on a metal plate on the right side of the engine block, depending on variant.

VIN = Vehicle Identification Number

WOL.....

1: Main VIN engraving	2: Main VIN + Emergency VIN engraving
	
The Vehicle Identification Number is visible through the windscreen.	The VIN is also displayed behind a removable plastic cover on the right hand side door step.

Weights and dimensions label



Pos.	Description
1	Unladen weight
2	Gross authorised train weight
3	Vehicle length
4	Vehicle surface area
5	Vehicle width
6	Gross authorised laden weight

1.4 CAB SEPERATING PARTITION

Panel vans and platform cabs may be delivered with partitions. Depending on the version, the partitions may come as standard or be available as an option.

The following partitions are available:

– Full glazed partition

– Full sheet-metal partition

These partitions are limited to H1 versions, the free space in H2 versions between the roof panel and the cab trim being reserved for accessing the roof storage area. The partitions are attached with screws and two rivets to make them theft-resistant.

Full partitions are not strictly sealed. These partitions comply with standard DIN 75410-3.

It is highly recommended, in case of attack or impact from the rear loading area, to add protection to the partition glazing area.

1.4.1 FULL METAL AND GLAZED PARTITION

PARTITION glazed and unglazed (view from cargo bay)

Note:

Coat hook on partition on the driver's side. Glazed surface area: 14dm^2.

For more information on dimensions can also be found in 2.2.3.-Side door dimensions.

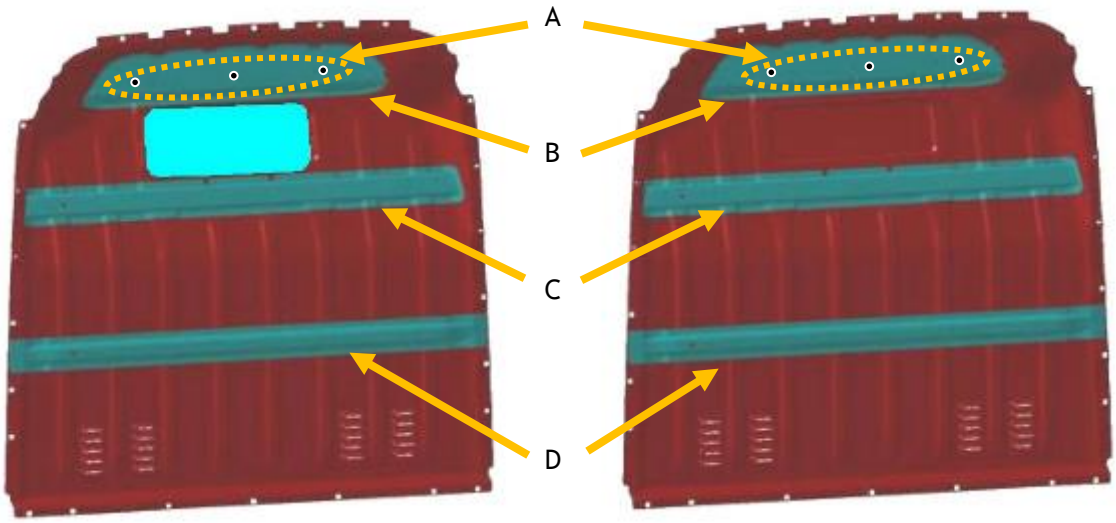
Adjusting range of driver's seat and ergonomics in the cabin must also be considered.

Their rigidity is ensured by three welded reinforces. The upper reinforce differs between the 3.5t and 4.5t versions (glazed or standard). There are three clothes hooks on the partition.

– PARTITION, GVW 3.5t (View from the Cockpit)

with window

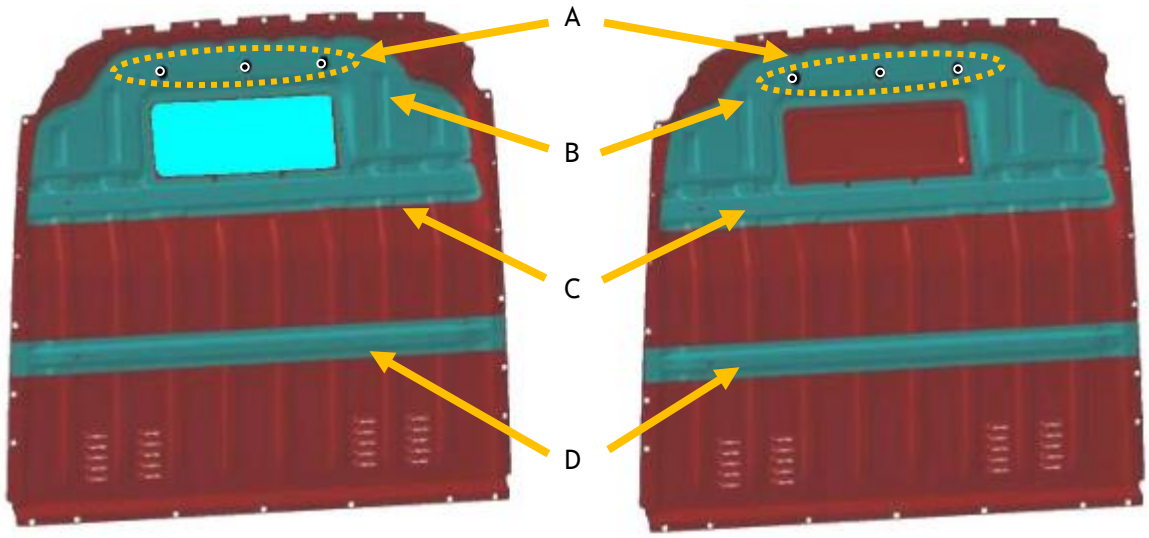
without window



– PARTITION, GVW 4.5t (View from the Cockpit)

with window

without window



Pos.	Description
A	Hooks
B	Upper reinforce
C	Middle reinforce
D	Lower reinforce

As an option, an additional partition trim to be offered (with or without windows) for the cockpit.

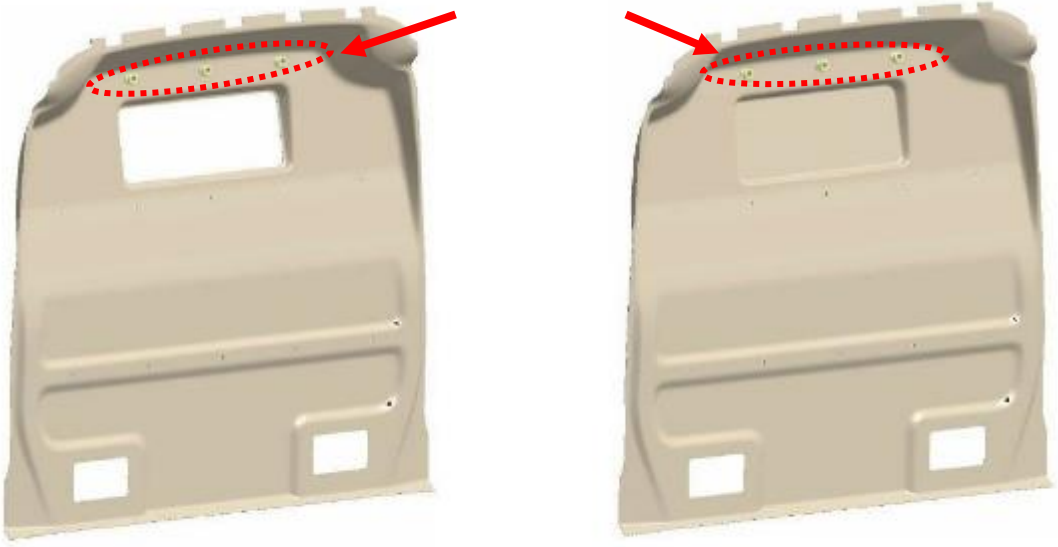
1.4.2 PARTITION TRIM: FULL METAL OR GLAZED

– FULL METAL AND GLAZED PARTITION TRIM (View from the Cockpit)

with window

without window

Hooks



1.5 LASHING POINTS

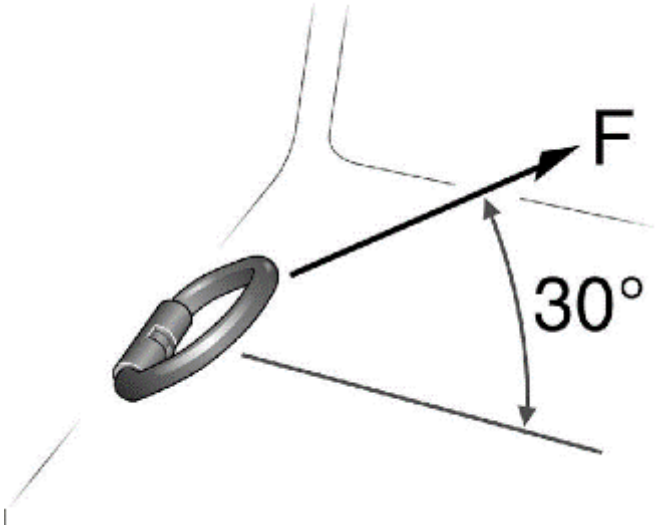
1.5.1 LASHING EYES

Lashing eyes are mounted in the load compartment to enable cargo to be secured in position using lashing straps or a luggage floor net.

The number of lashing points on the floor varies depending on the panel van version:

- 6 lashing points on the floor and 2 on the far rear pillar for L1 vans
- 8 lashing points on the floor and 2 on the far rear pillar for L2 vans
- 10 lashing points on the floor and 2 on the far rear pillar for L3 vans
- 12 lashing points on the floor and 2 on the far rear pillar for L4 vans

These lashing points comply with the requirements of standard DIN 75410-3 (Load per ring: 500daN with an angle of 30° according to the position of the ring buckle).



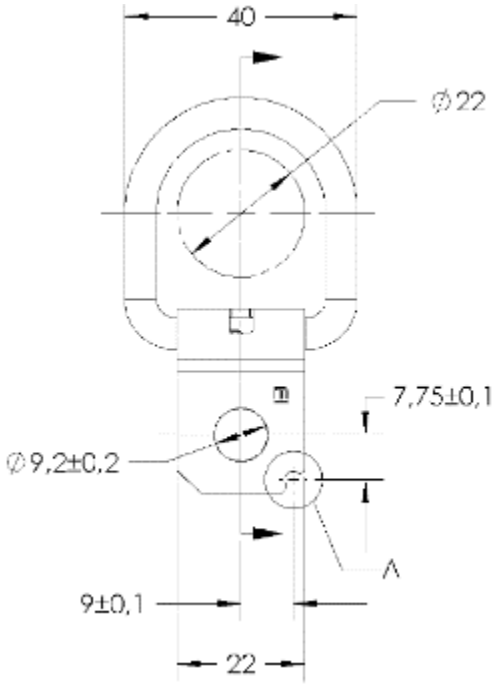
Their positioning is symmetrical to the body axis (Y = 0).

They are attached to the body with M8 x 125 (Art. Nr. 93198257) fastening screws, tightening torque: 21Nm.

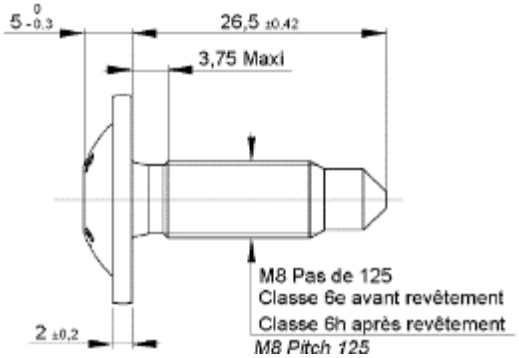
As an option, it is possible to have 8 lashing points on the side panels.

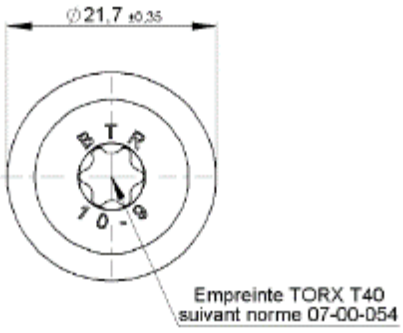
1.5.2 DETAILS ON FASTENING AND LASHING POINTS

– Lashing point (Part no. 93861156)



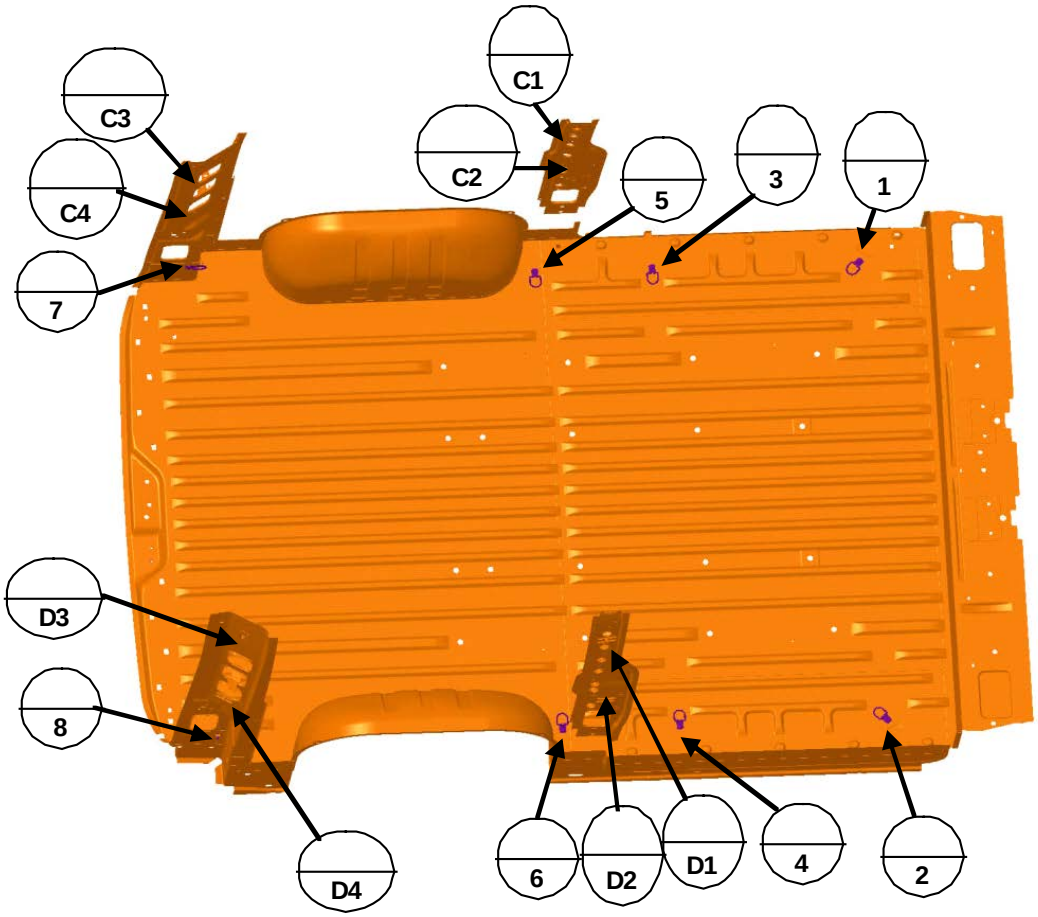
– Fastening screw





1.5.3 BODY MOUNTINGS

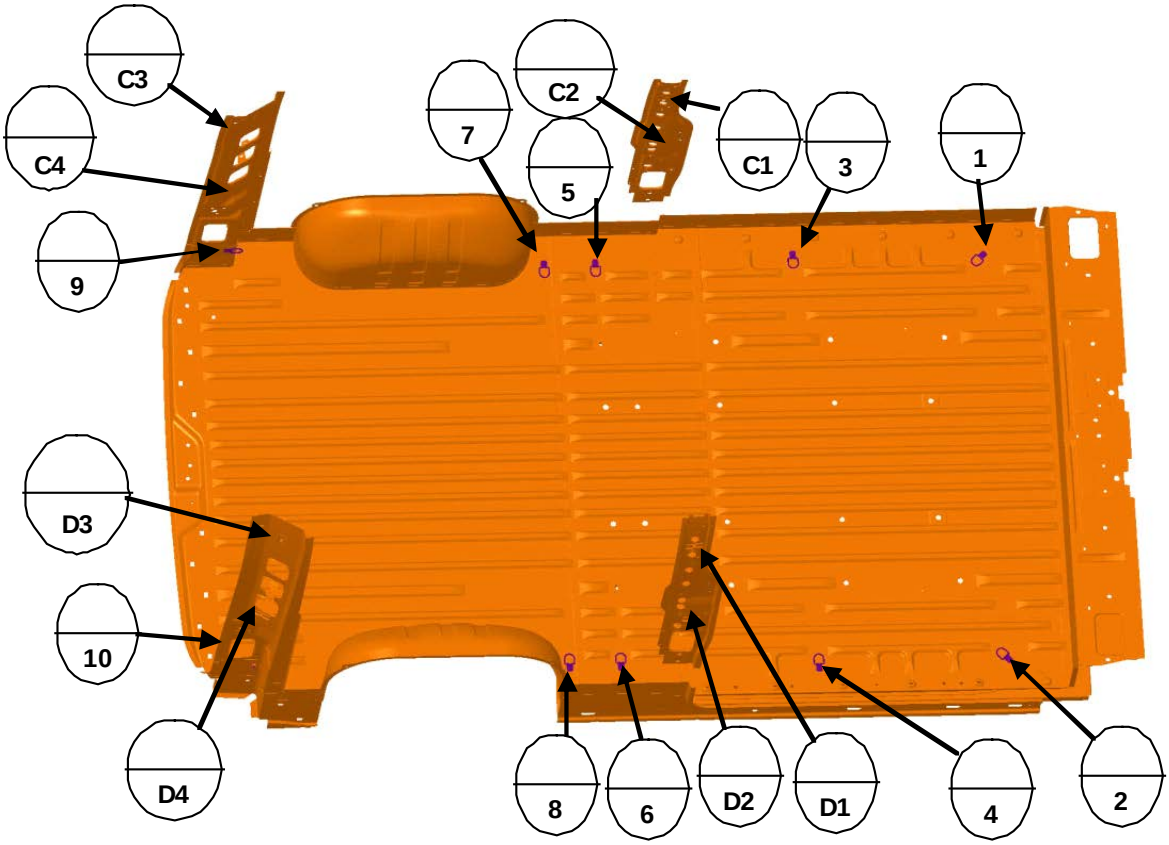
– Panel van L1, front wheel drive



Panel Van L1

Pts.	X	Y	Z	Comments
1	1,667	-772.5	251.75	on floor
2	1,667	777.5	251.75	on floor
3	2,341	-775	251.75	on floor
4	2,341	775	251.75	on floor
5	2,721.5	-775	251.75	on floor
6	2,721,5	775	251.75	on floor
7	3,854.5	-790	392	on side panel
8	3,854.5	790	392	on side panel
C1	2,686	-853	1,545	on side panel
C2	2,642.8	-874.2	937	on side panel
C3	3,859.3	-802.5	1,545	on side panel
C4	3,873	-817.2	913	on side panel
D1	3,873	853	1,545	on side panel
D2	2,642.8	874.2	937	on side panel
D3	3,859.3	802.5	1,545	on side panel
D4	3,873	817.2	913	on side panel

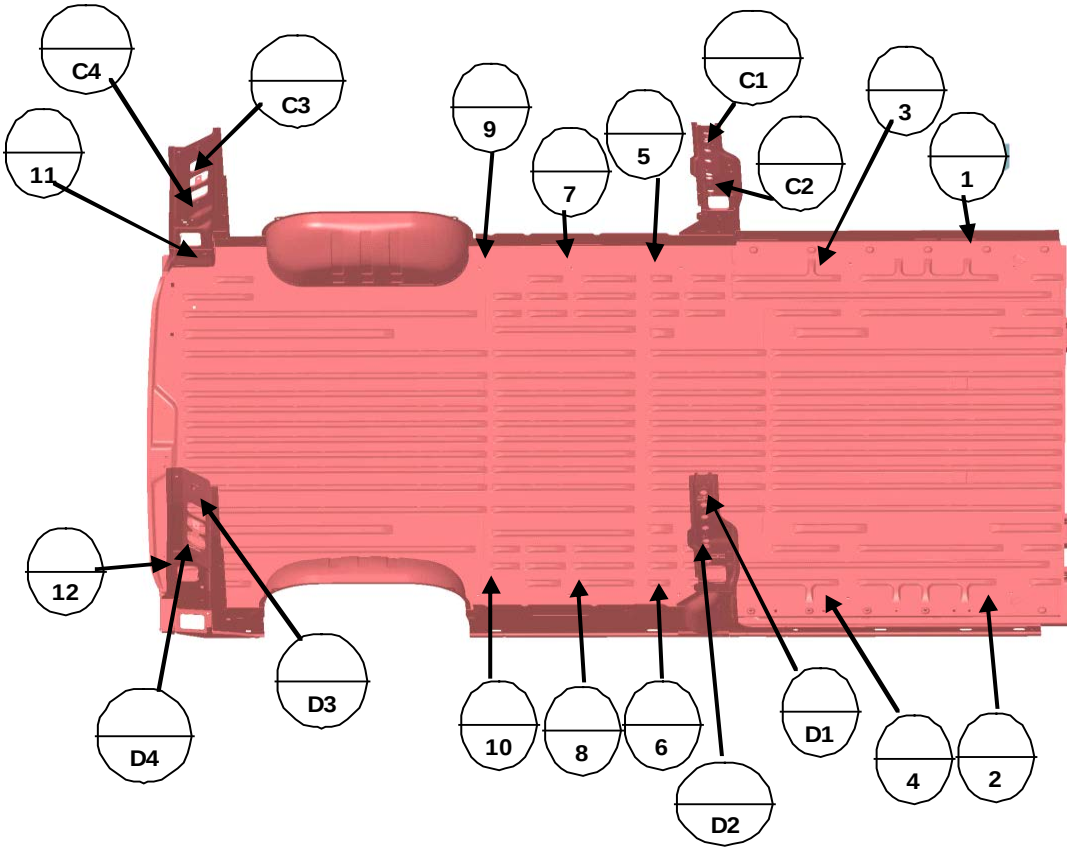
– Panel van L2, front wheel drive



Panel Van L2

Pts.	X	Y	Z	Comments
1	1,667	-777.5	251.75	on floor
2	1,667	772.5	251.75	on floor
3	2,341	-793	251.75	on floor
4	2,341	793	251.75	on floor
5	3,040.5	-775	251.75	on floor
6	3,040.5	775	251.75	on floor
7	3,221.5	-775	251.75	on floor
8	3,221.5	775	251.75	on floor
9	4,354.5	-790	392	on side panel
10	4,354,5	790	392	on side panel
C1	2906	-853	1,545	on side panel
C2	2,862.8	-874	937	on side panel
C3	4,359.3	-802.5	1,545	on side panel
C4	4,373	-817.2	913	on side panel
D1	2,906	853	1,545	on side panel
D2	2,862.8	874	937	on side panel
D3	4,359.3	802.5	1,545	on side panel
D4	4,373	817.2	913	on side panel

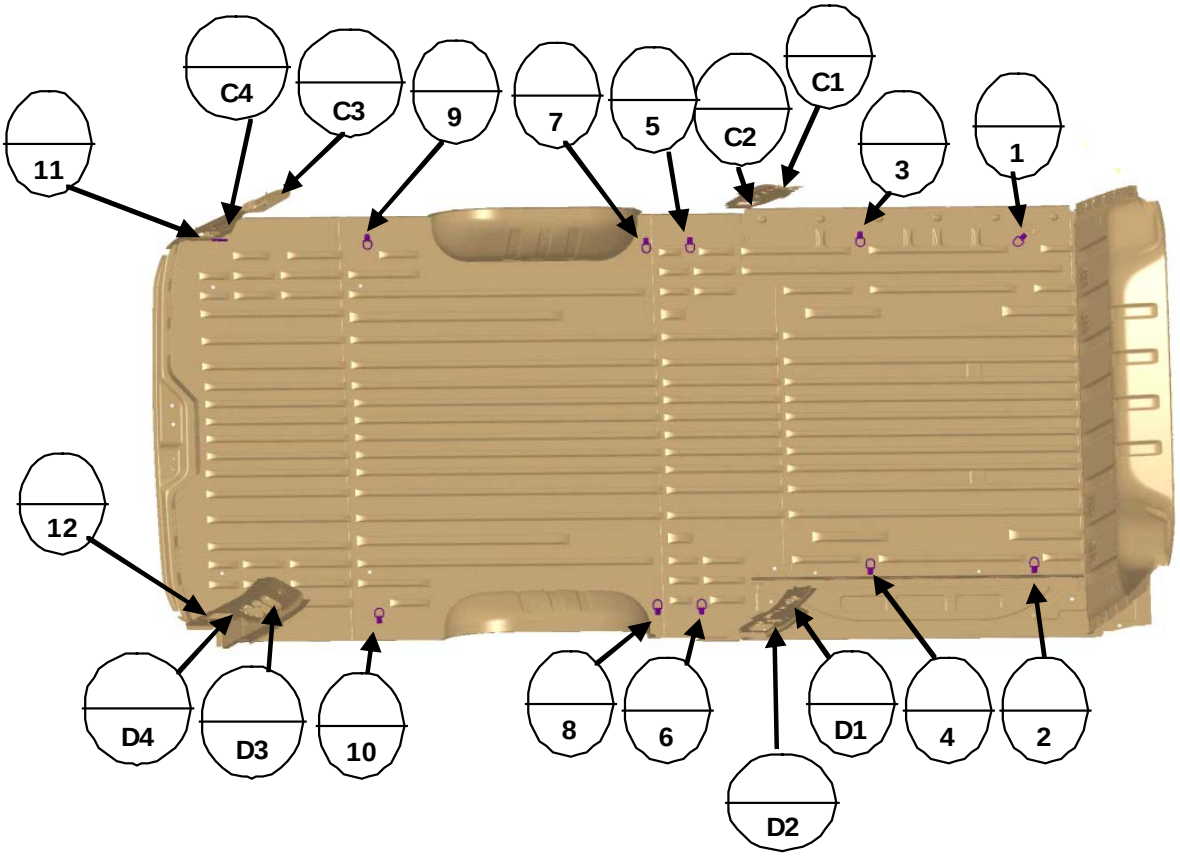
– Panel van L3, front wheel drive



Panel Van L3, Front Wheel Drive

Pts.	X	Y	Z	Comments
1	1,667	-777.5	251.75	on floor
2	1,667	772.5	251.75	on floor
3	2,341	-793	251.75	on floor
4	2,341	793	251.75	on floor
5	3,040.5	-775	251.75	on floor
6	3,040.5	775	251.75	on floor
7	3,491	-775	251.75	on floor
8	3,491	775	251.75	on floor
9	3,871.5	-775	251.75	on floor
10	3,871.5	775	251.75	on floor
11	5,004.5	-790	392	on side panel
12	5,004.5	790	392	on side panel
C1	2,906	-853	1,545	on side panel
C2	2,862.8	-874	937	on side panel
C3	5,009.3	-802.5	1,545	on side panel
C4	5,023	-817.2	913	on side panel
D1	2,906	853	1,545	on side panel
D2	2,862.8	874	937	on side panel
D3	5,009.3	802.5	1,545	on side panel
D4	5,023	817.2	913	on side panel

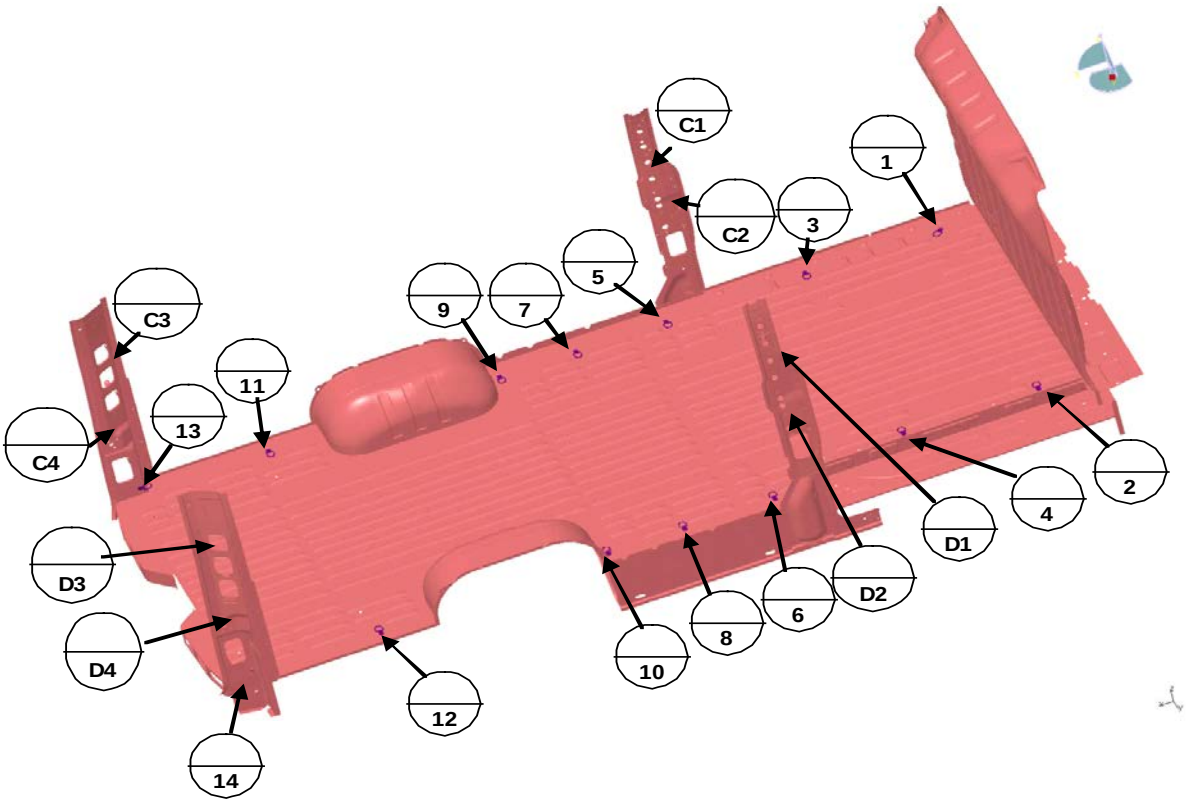
– Panel van L3, rear wheel drive



Panel Van L3, Rear Wheel Drive

Pts.	X	Y	Z	Comments
1	1,667	-777.5	347.75	on floor
2	1,667	614	347.75	on floor
3	2,341	-793	347.75	on floor
4	2,341	614	347.75	on floor
5	3,040.5	-775	347.75	on floor
6	3,040.5	775	347.75	on floor
7	3,221.5	-775	347.75	on floor
8	3,221.5	775	347.75	on floor
9	4,367.5	-800	347.75	on floor
10	4,367.5	800	347.75	on floor
11	5,004.5	-790	392	on side panel
12	5,004.5	790	392	on side panel
C1	2,906	-853	1,545	on side panel
C2	2,862.8	-874	937	on side panel
C3	5,009.3	-802.5	1,545	on side panel
C4	5,023	-817.2	913	on side panel
D1	2,906	853	1,545	on side panel
D2	2,862.8	874	937	on side panel
D3	5,009.3	802.5	1,545	on side panel
D4	5,023	817.2	913	on side panel

– Panel van L4, rear wheel drive



Panel Van L4, Rear Wheel Drive

Pts.	X	Y	Z	Comments
1	1,667	-777.5	347.75	on floor
2	1,667	614	347.75	on floor
3	2,341	-793	347.75	on floor
4	2,341	614	347.75	on floor
5	3,040.5	-775	347.75	on floor
6	3,040.5	775	347.75	on floor
7	3,491	-775	347.75	on floor
8	3,491	775	347.75	on floor
9	3,871.5	-775	347.75	on floor
10	3,871.5	775	347.75	on floor
11	5,017.5	-800	347.75	on floor
12	5,017.5	800	347.75	on floor
13	5,654.5	-790	392	on side panel
14	5,654.5	790	392	on side panel
C1	2,906	-853	1,545	on side panel
C2	2,862.8	-874	937	on side panel
C3	5,659.3	-802.5	1,545	on side panel
C4	5,673	-817.2	913	on side panel
D1	2,906	853	1,545	on side panel
D2	2,862.8	874	937	on side panel
D3	5,659.3	802.5	1,545	on side panel
D4	5,673	817.2	913	on side panel

1.6 ROOF RACKS AND ROOF BARS

Fixing points for roof rack systems

Movano vehicles are prepared for the fitting of a roof rack, except on models with an H3 high roof. The use of roof rack fixing points requires an inside connection and reinforcement plate between the roof and roof strut reinforcement.

For safety reasons and to avoid damage to the roof, the vehicle approved roof rack system is recommended. Follow the installation instructions and remove the roof rack when not in use. Driving with a roof load increases the sensitivity of the vehicle to cross-winds and has a detrimental effect on vehicle handling due to the vehicle's higher centre of gravity. Distribute the load evenly and secure it properly with retaining straps. Adjust the tyre pressure and vehicle speed according to the load conditions.

Caution:

For passenger transport vehicles fitted with emergency exits in the roof, it is forbidden to block or even partially obstruct these openings when installing roof racks or roof bars.

Where fastenings are not used, the plugs must be left in place.

Caution:

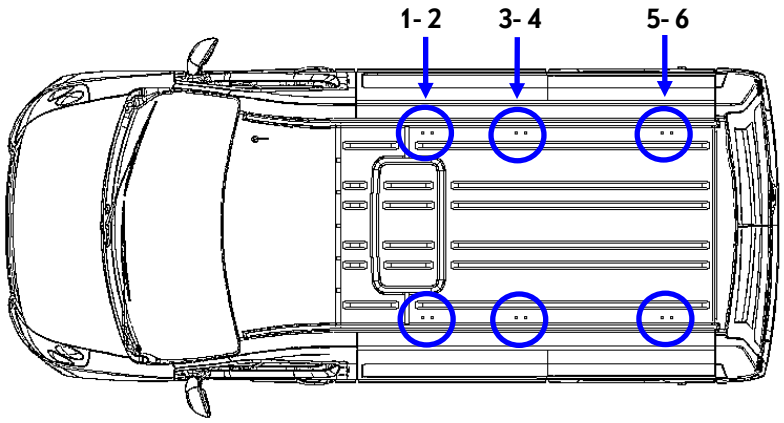
The maximum permissible mass per bar on the roof is 50kg.

The maximum permissible mass on the roof is 200kg.

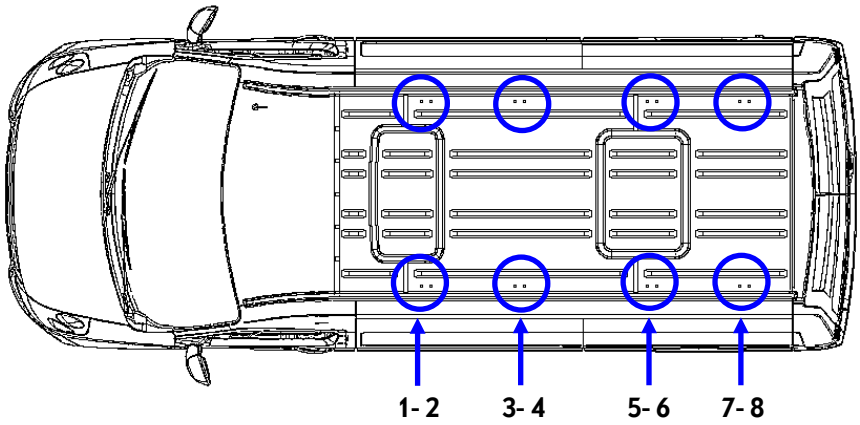
The maximum permissible mass on the roof, in consideration of the use of all fixing points is limited to:

- 150kg for panel van L1H1/L1H2 and
- 200kg for panel van L2H2, L3H2 and L4H2.

L1H1 / L1H2



L2H2

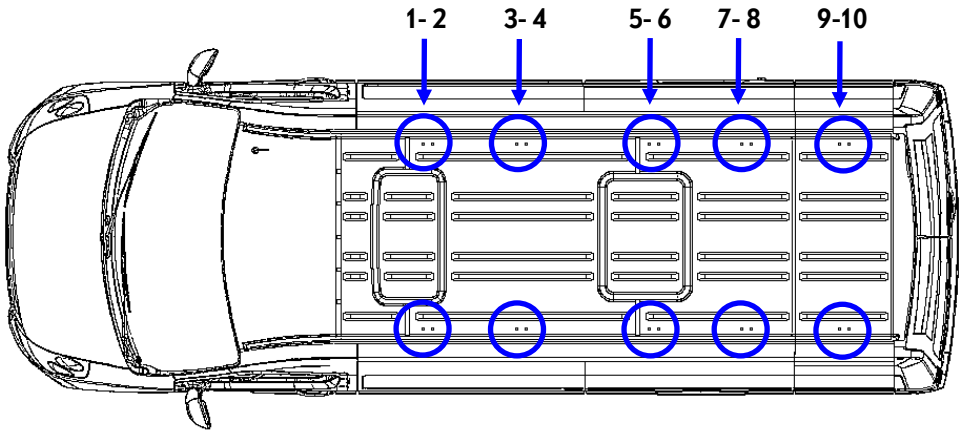


	L1H1			L1H2			L2H2		
	X	Y (+/-)	Z	X	Y (+/-)	Z	X	Y (+/-)	Z
1	1,557	660	1,979	1,557	600	2,177	1,557	600	2,177
2	1,617.5			1,617.5			1,617.5		
3	2,397			2,397			2,480		
4	2,458			2,458			2,540		
5	3,635.5			3,635.5			3,330		
6	3,696			3,696			3,390		
7	--			--			4,135.5		
8	--			--			4,196		

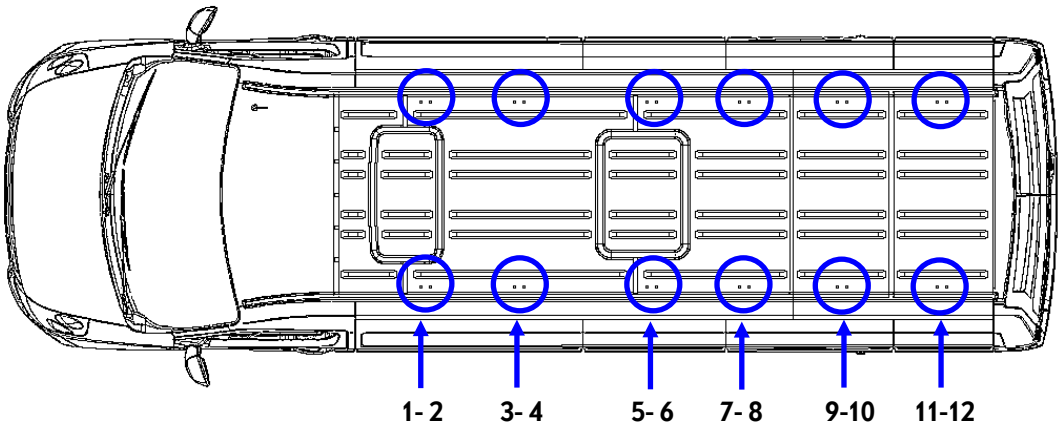
Note:

The values are in mm and start from the axis of the front axle for the dimensions along X.

L3H2



L4H2



	L3H2			L4H2		
	X	Y (+/-)	Z	X	Y (+/-)	Z
1	1,557	660	2,177	1,557	600	2,177
2	1,617.5			1,617.5		
3	2,480			2,480		
4	2,540			2,540		
5	3,330			3,330		
6	3,390			3,390		
7	3,938			3,938		
8	3,999			3,999		
9	4,785.5			4,785.5		
10	4,846			4,846		
11				5,435.5		
12				5,496		

Note:

The values are in mm and start from the axis of the front axle for the dimensions along X.

Roof bars

Vehicle type	Max. number of bars	Length	Mass of one bar	Max. permissible load on the roof (all fixing points must be used)
L1H1	3	approx. 1,650mm	approx. 2.4kg	150kg
L1H2		approx. 1,530mm	approx. 2.3kg	
L2H2	4			200kg
L3H2	5			
L4H2	6			

*=Weight and length may vary depending on version.


Example of roof bars

Roof racks

Vehicle type	Number of mountings	Mass of the roof rack* (Vauxhall accessory)	Max. permissible load on the roof (all fixing points must be used)
L1H1	2 x 3	approx. 22,7kg	200kg
L1H2		approx. 22,0kg	
L2H2	2 x 4	approx. 30,5kg	200kg
L3H2	2 x 5	approx. 34,5kg	
L4H2	2 x 6	approx. 43,0kg	

*= Weight may vary depending on version.


Example of roof rack

Note:

The listed roof beams are only applicable for the roof heights H1 and H2. The H3 - roof is made of plastic and can not carry the load of the roof rack.

Where a roof rack is required, the task of the bodybuilder is to add structural reinforcements to avoid damage to the roof and to ensure the compatibility of the height of the center of gravity of the equipped and loaded vehicle. (See chapter 3.1 - Restrictions - ESP)

Roof racks can be complemented with a ladder for access to the roof rack; a walkway enables movement around the roof rack.

If a roof rack not included in the above-mentioned references is assembled or additional elements are mounted on the roof, the vehicle MUST be fitted with joint reinforcements between the roof drip moulding and roof rack.

The bodybuilder must determine the lateral fastenings (at least 2 per crossbeam).

- The upper crossbeam of the roof rack runs over the roof
- The lateral attachment of the roof rack must necessarily include a counterplate (reinforcing bracket) behind the vehicle roof panel in order to avoid a crack in the vehicle structure.

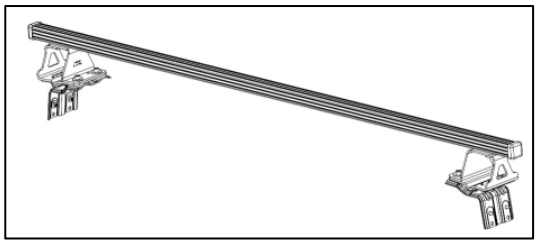
The longitudinal beams on the roof of the base vehicle are not always equipped with holes to mount reinforcements. In this case, it may be necessary to drill additional holes.

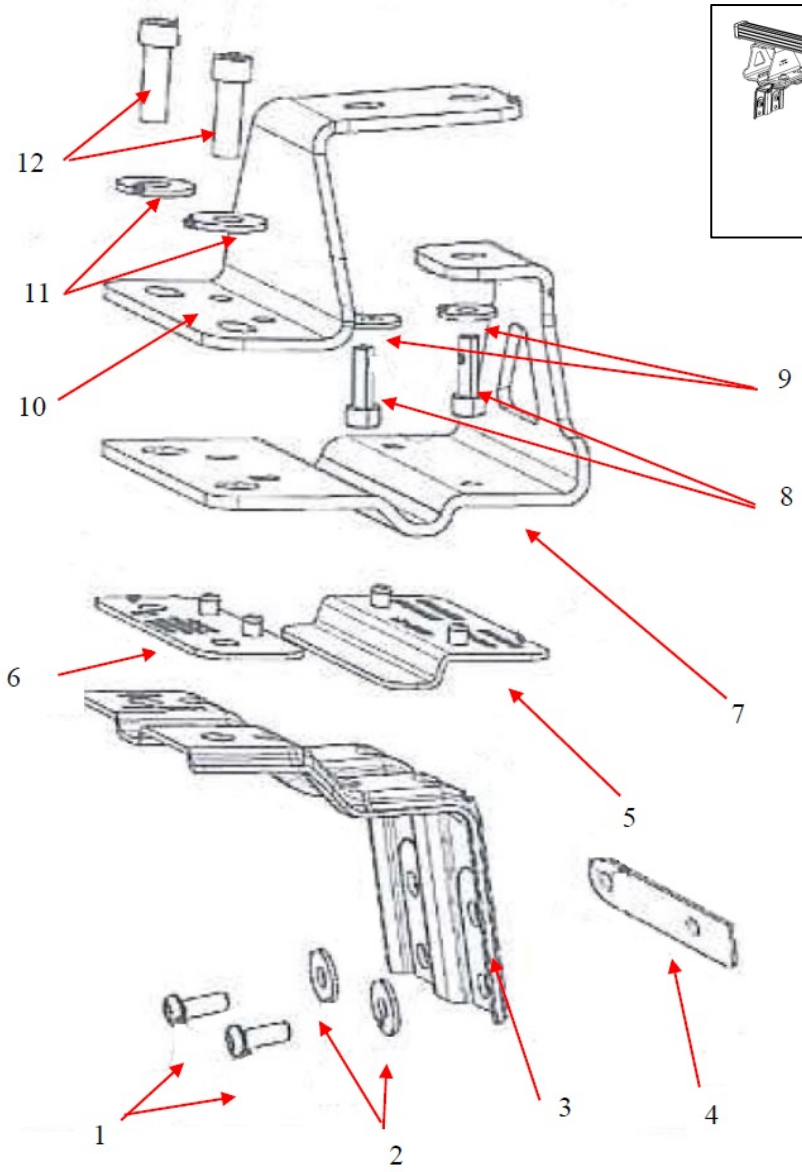
It is forbidden to use non-structural rivets.

The converter is responsible that the reinforcement meets mechanical strength requirements, his specification and the regulatory requirements.

- The load of the roof rack or other components attached to the roof must not exceed the maximum permissible roof load.

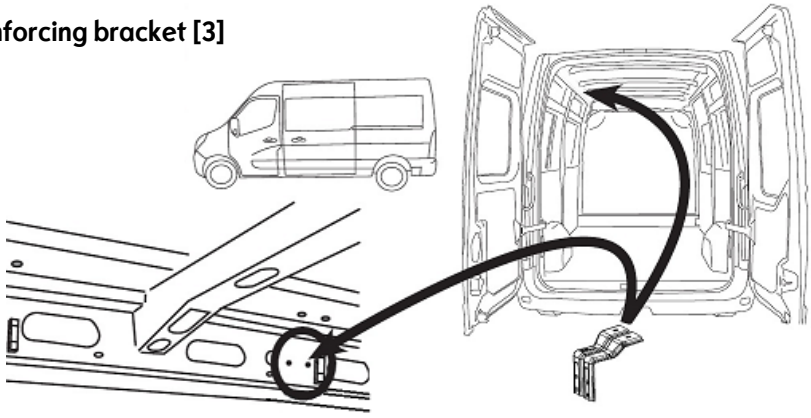
Example of mounting the Opel roof rack:

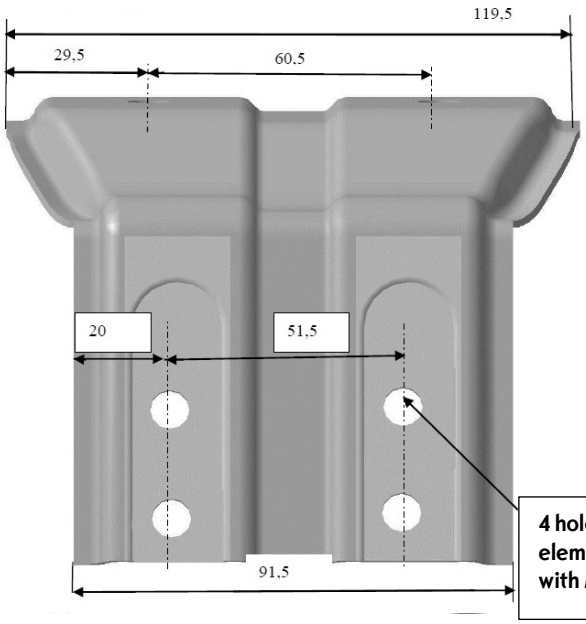




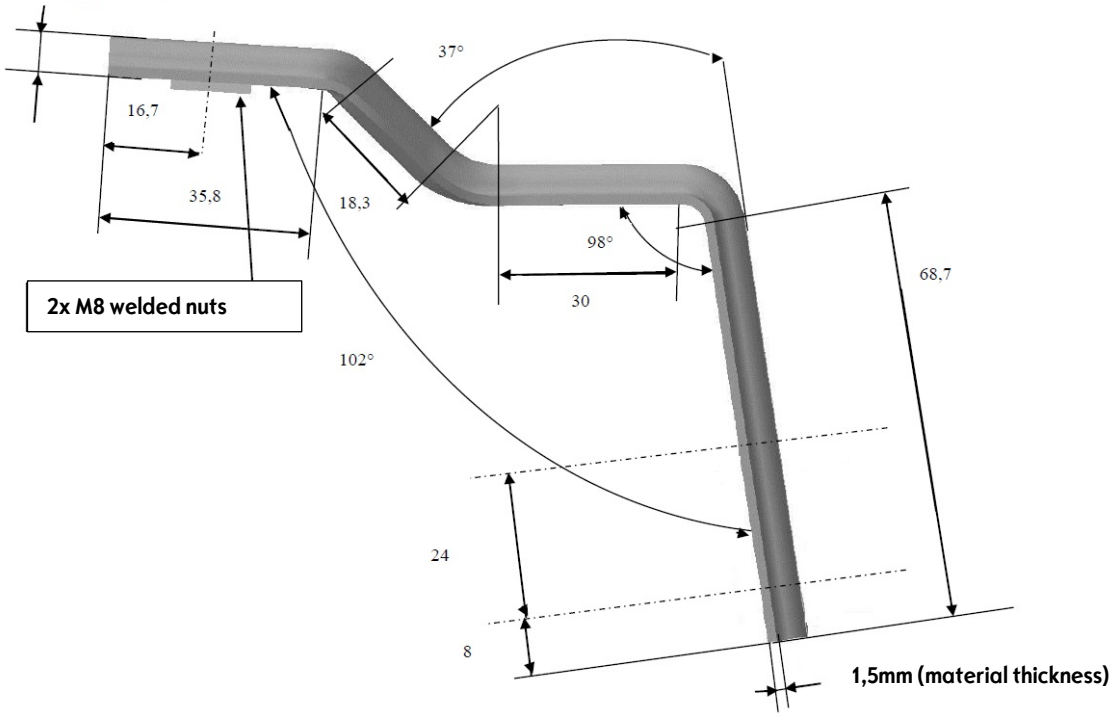
part	description	number:
1	screw	2
2	washer	2
3	Reinforcing bracket (mounting from the inside)	1
4	screw plate	2
5	Roof support 1	1
6	Roof support 2	1
7	lateral bracket 1	1
8	screw	2
9	washer	2
10	lateral bracket 2	1
11	washer	2
12	screw	2

Example for reinforcing bracket [3]





6,5mm (rib high)



1.7 TRAILER HITCH

A trailer hitch is available as an option for the panel van, combi models und chassis cabs; a tow bar can also be obtained as an accessory from your Opel/ Vauxhall dealer (all models, including chassis cab).

The fitted tow bar must comply with European standard 94/20.

The permissible maximum tow able, unless otherwise noted:

- **of a braked trailer is = 2,500kg,**

  vehicles with a GVW of 3500kg and single wheels only. The maximum nose weight is 100kg (vertical force allowable on the ball/towing system).

- **of a braked trailer is = 3,000kg,**

  vehicles with a GWV of 4500kg, RWD and twin wheels only. The maximum nose weight is 120kg (vertical force allowable on the ball/towing system).

- **of a braked trailer is = 3,500 kg,**

  chassis cab with a GWV of 3500kg, RWD and twin wheels only. The maximum nose weight is 140kg (vertical force allowable on the ball/towing system).

- **of an unbraked trailer is 750kg**

  The permissible trailer loads are specified in the vehicle documents. In general, they are valid for gradients up to max. 12%.

RWD = rear wheel drive.
GVW = gross vehicle weight.

Mounting points and fabrication tolerances are given as follows; it is essential that all these mounting points are used.

Note:

Vehicles from MY2015 are usually equipped with a trailer stability function (=TSF).

This system helps improve vehicle stability when it is towing a trailer or caravan. The system detects the oscillation being a trailer and rear brake works by alternating left / right to cancel the oscillations.

The TSF-function is deactivated in vehicles without tow bar. When retrofitting a trailer hitch, this function can be activated by your Opel/ Vauxhall-Service. With the diagnostic tool [GDS2] under the option item "Trailer Brake Control" it is possible to activate this function.

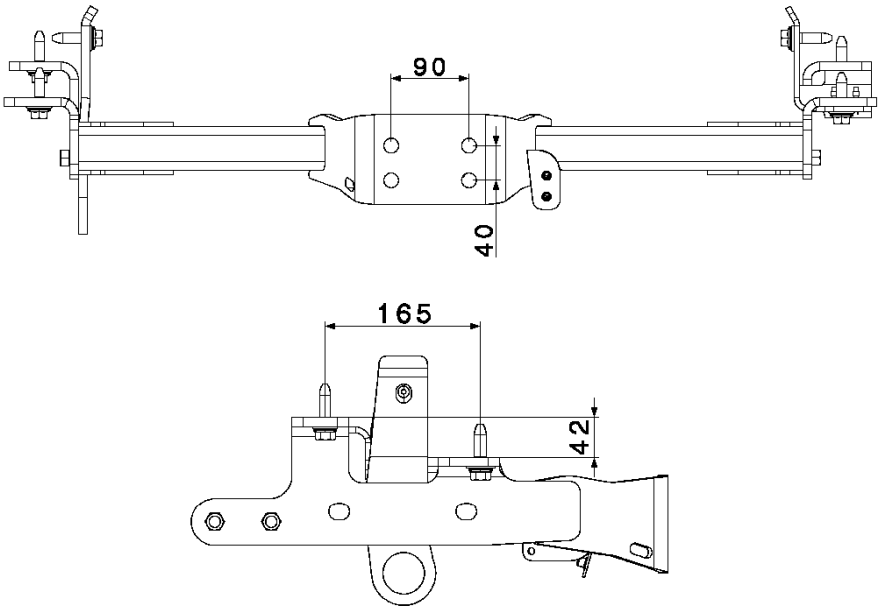
In the case of a change in the rear overhang, reinforcing brackets must be added if a trailer hitch is fitted. These reinforcing brackets will ensure the soundness of the vehicle's side member when towing.

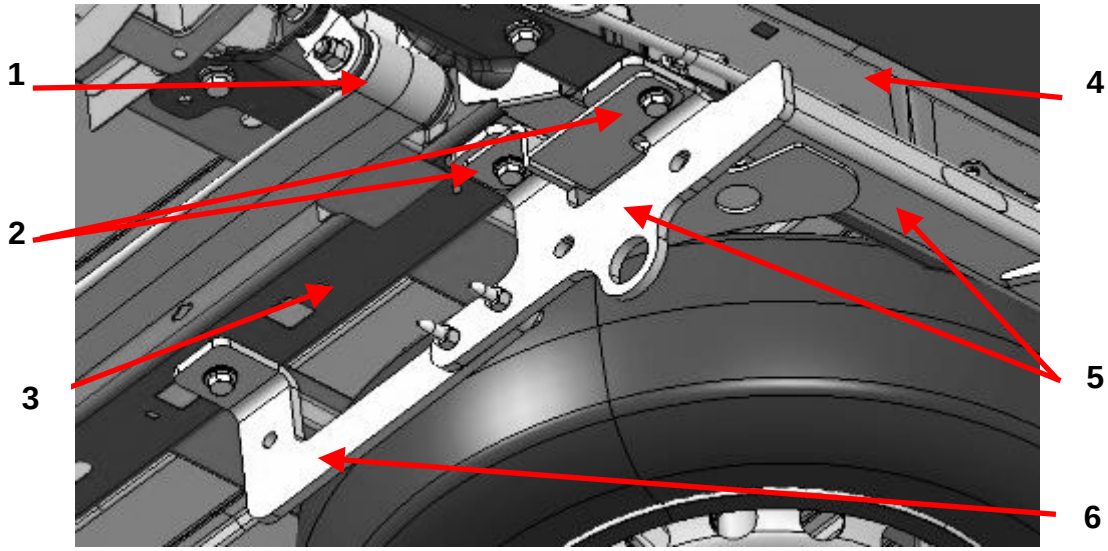
It may be necessary to check compliance with the regulations.

The wiring diagram for this trailer hitch is given in chapter 1.7.2.

1.7.1 MECHANICAL COMPONENTS

Trailer hitch on panel vans



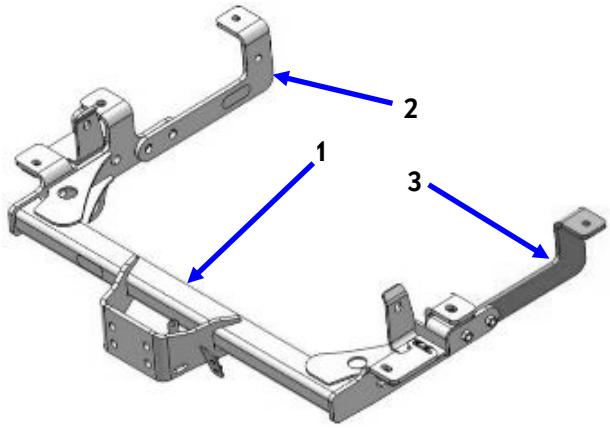


View from the bottom assembly, left side

Pos.	Description
1	Rear left suspension
2	SCREW: HM12X175-55
3	Rear section of the rear left sidemember
4	Rear crossmember and skirt
5	Trailer hitch
6	Support trailer hitch

Front wheel drive version

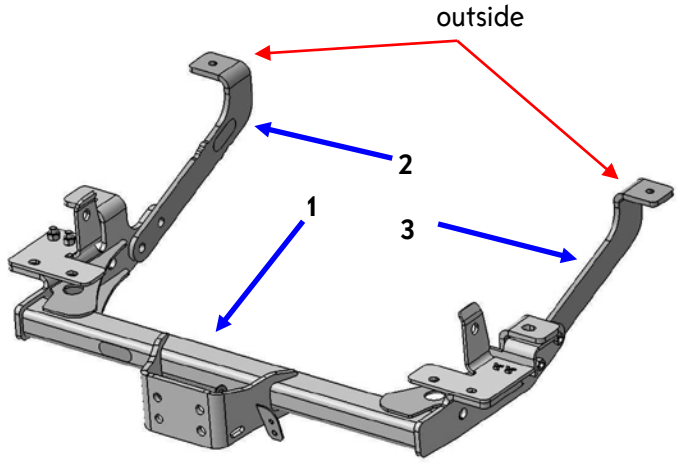
(Towing weight 2.5t)



Pos.	Description
1	Trailer hitch
2	Support left side
3	Support right side

Single wheel rear drive version

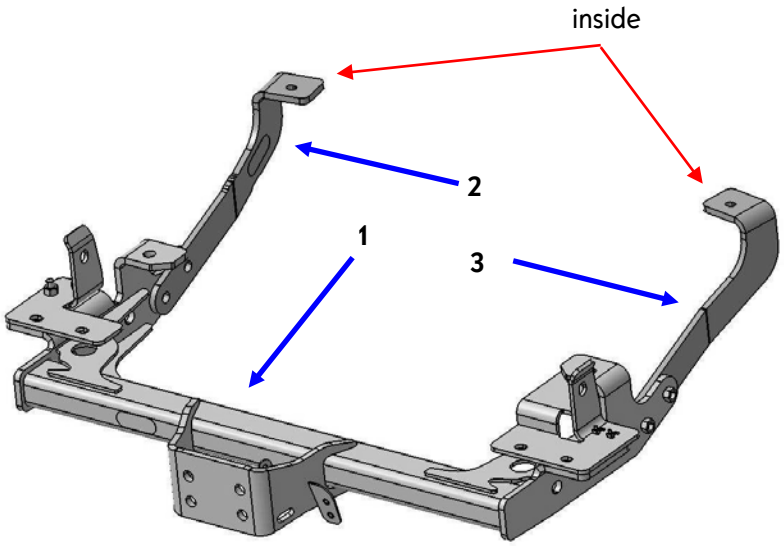
(Towing weight 2.5t)



Pos.	Description
1	Trailer hitch
2	Support left side
3	Support right side

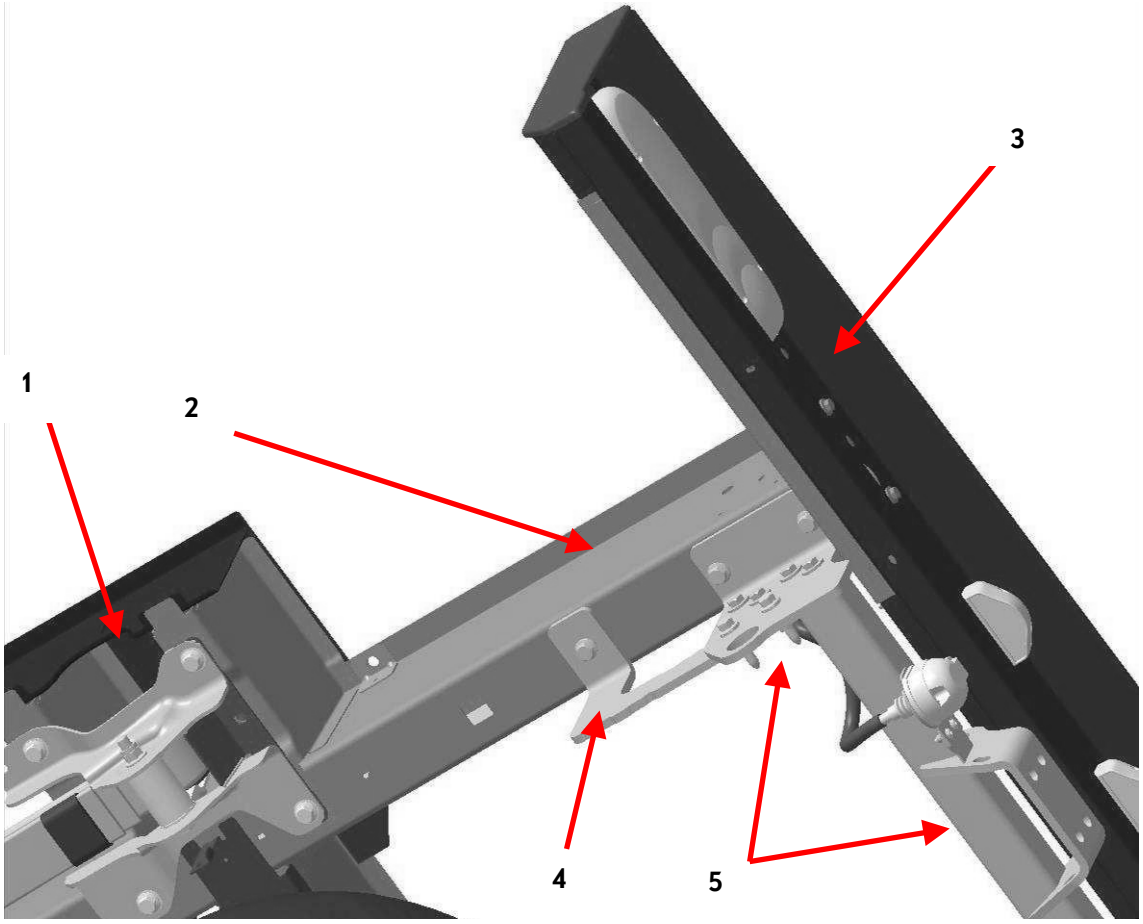
Rear wheel drive version

(Towing weight 3t)



Pos.	Description
1	Trailer hitch
2	Support left side
3	Support right side

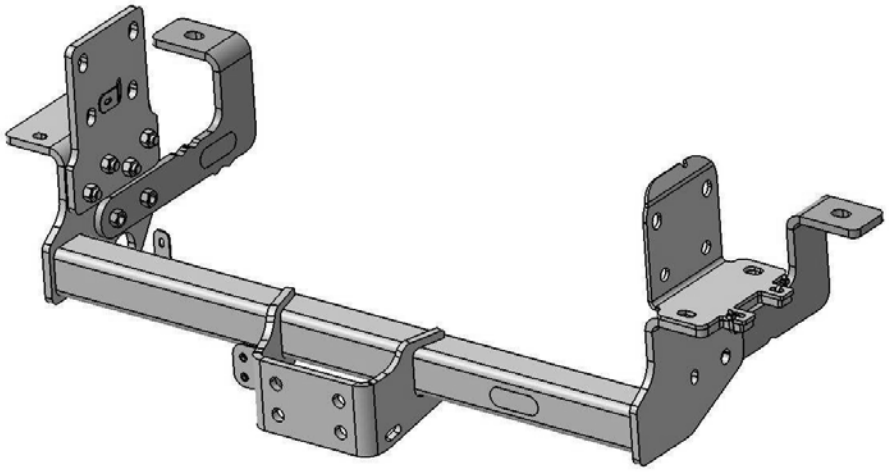
Tow bars on chassis cabs and chassis double cabs

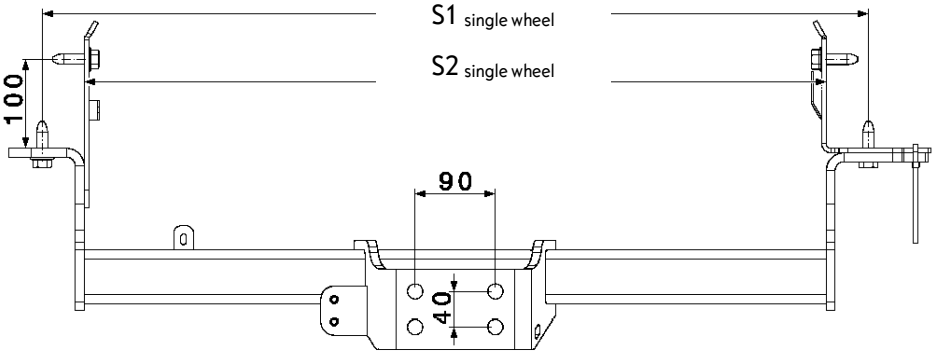


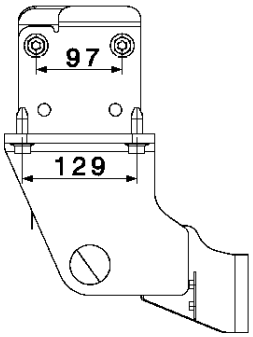
Pos.	Description
1	Rear left suspension
2	Rear section of the rear left sidemember
3	Extreme rear crossmember
4	Support trailer hitch
5	Trailer hitch

Front or rear wheel drive version

(Single wheel, Towing weight 2,5t)

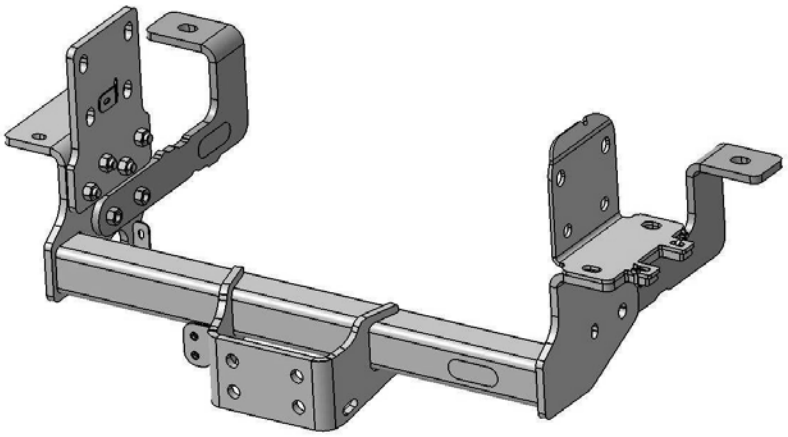


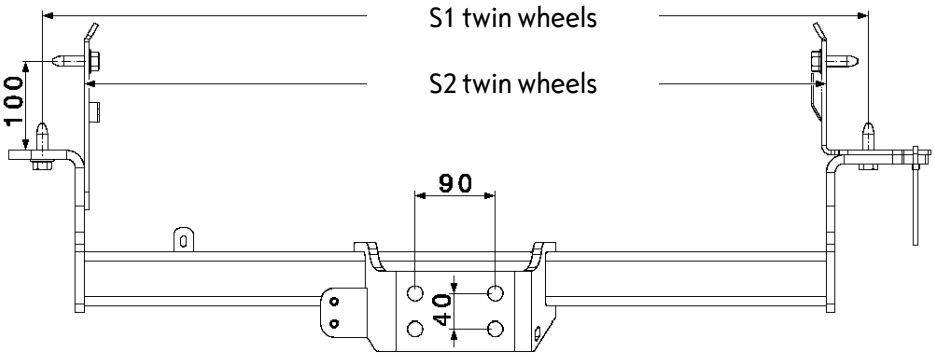


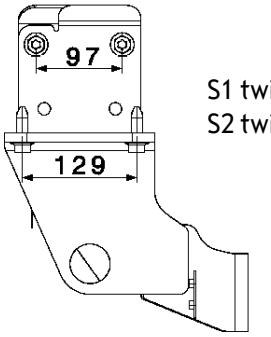


Rear wheel drive version

(Twin wheel, Towing weight 3,5t, long overhang**)**







S1 twin wheels < S1 single wheel
S2 twin wheels < S2 single wheel

Note:

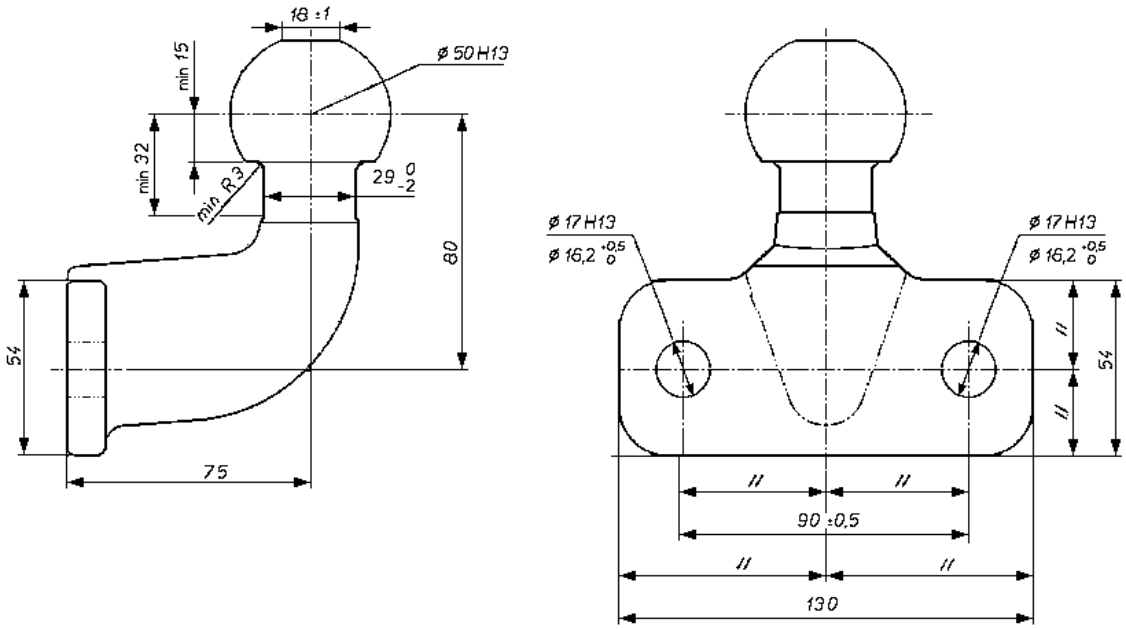
The short overhang chassis cab version is not compatible with the coupling devices described above. It may be necessary to check compliance with the regulations.

Dimensions trailer hitch ball

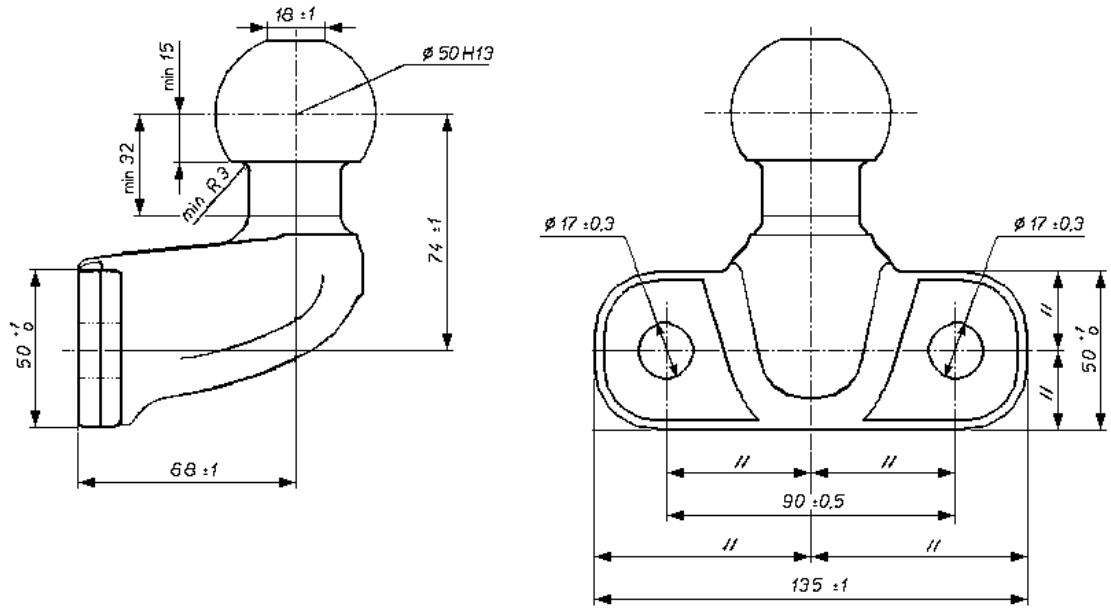
Trailer hitch ball type approved at:

- **2,5t for vehicles with single rear wheel.**
- **3,0t and 3,5t for vehicles with twin rear wheel.**

Version 2,5t



Version 3t und 3,5t



min = minimum

1.7.2 ELECTRICAL PLUG FOR TRAILER HITCH

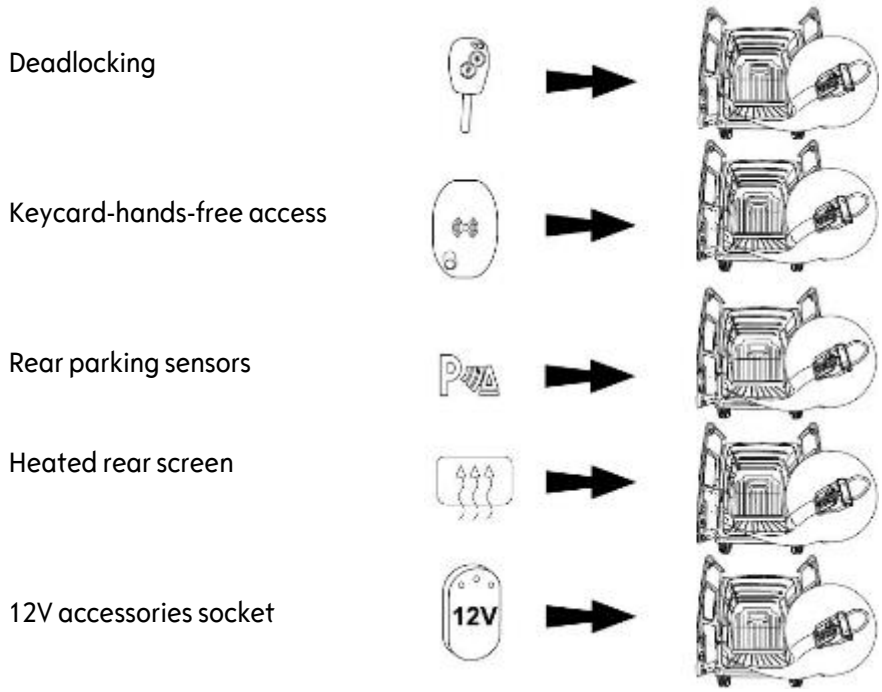
The first-fit electric plug for the coupling and the one available from after-sales are 13-pin type. Assignment of the pins is standardised.

The coupling wiring can be connected to the vehicle in three ways:

- On panel vans with coupling equipment pre-fitted or the "VR2" option:
  special 10-way intermediate connector fitted in the rear left pillar.
- On panel vans without coupling equipment pre-fitted or the "VR2" option:
  Pick-offs need to be created at the vehicle's tail light location. Please refer to the "Lights Information" sheet.
- On chassis cabs and platform cabs:
  special 10-way intermediate connector on the rear left of the chassis.

With electrical pre-fitting for towbar

Pre-wiring for the connection of towing equipment is provided if the vehicle is equipped with one of the following options:

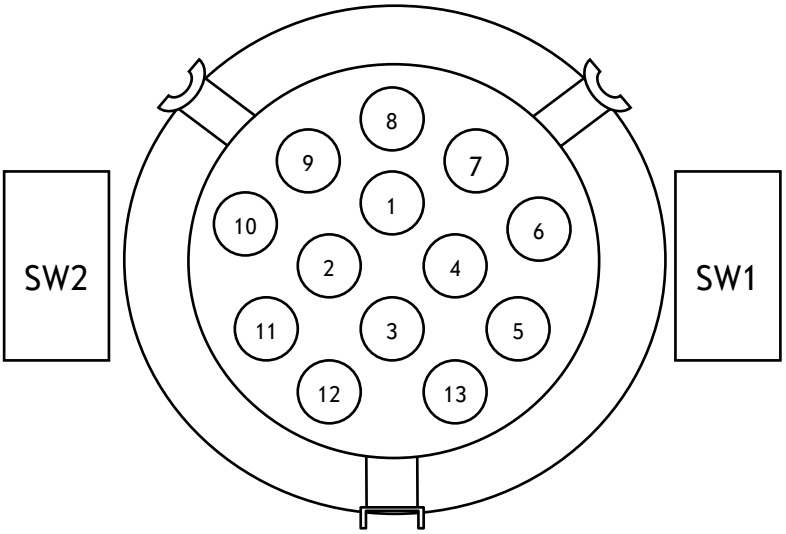


Characteristics of the towbar plug

The electric plug for the towbar, delivered at first-fit, is a 13-pin plug (see below). This plug is also available at after-sales.

Two electrical switches are built into the plug. They are activated according to the opening and closing of the towbar plug cover.

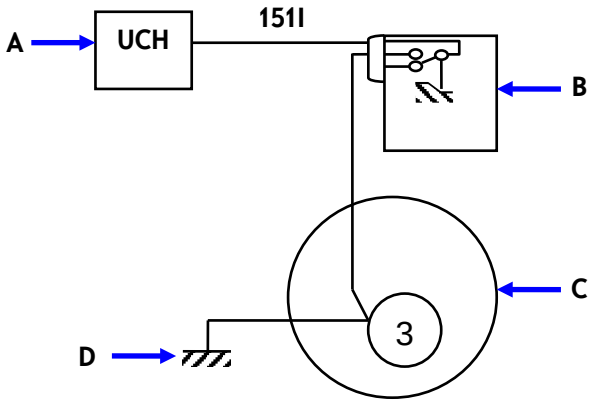
– **Assignment of connector tracks**



Way number:	Assignment:
1	Left turn signal light
2	Rear fog lamp
3	Ground (10A max)
4	Right turn signal light
5	Right side light
6	Brake lights
7	Left side light
8	Reversing lamp
9	Not wired
10	Not wired
11	Not wired
12	Not wired
13	Not wired (Ground 10A max)
SW1	Trailer presence
SW2	Rear fog lamp disconnection

The SW1 switch indicates the presence or absence of the trailer to the vehicle ECUs (see SW1 diagram below).

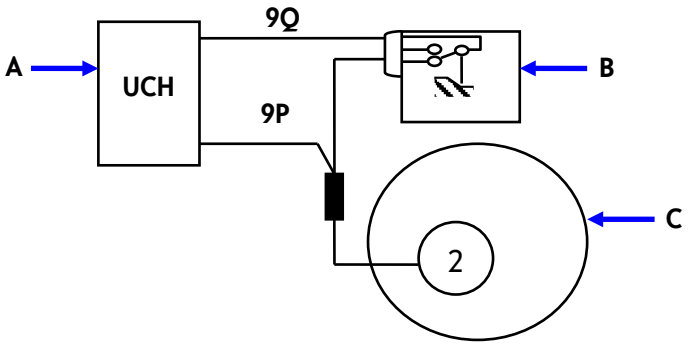
– **SW1 – Electrical diagram**



Pos.	Description
A	Passenger Compartment Control Unit (UCH)
B	SW1 switch
C	Coupling plug, channel 3
D	Ground

The SW2 switch enables the vehicle ECUs to automatically disconnect the rear fog light (see SW2 diagram below).

– **SW2 – Electrical diagram**



Pos.	Description
A	Passenger Compartment Control Unit (UCH)
B	SW2 switch
C	Coupling plug, channel 2

Note:

Assignment of the pins is standardised.

– **Wiring and connections**

The towbar wiring pre-fitting is present in the vehicle with certain options. The wiring differs according to the vehicle type.

– **After-sales wiring**

After-sales wiring is available for vehicles that are not electrically pre-fitted.

Depending on the equipment level, the vehicle type and the USM type, various towbar wiring harnesses are available at after-sales (see table below).

Note:

Connecting the coupling plug maintains the service monitoring operation of the vehicle's indicators and also allows the rear parking sensor to be disabled.

1.8 TYRES AND TURNING CIRCLE/ SPARE WHEEL

1.8.1 TYRES

The basic tire assembly, except in specific situations, is as follows:

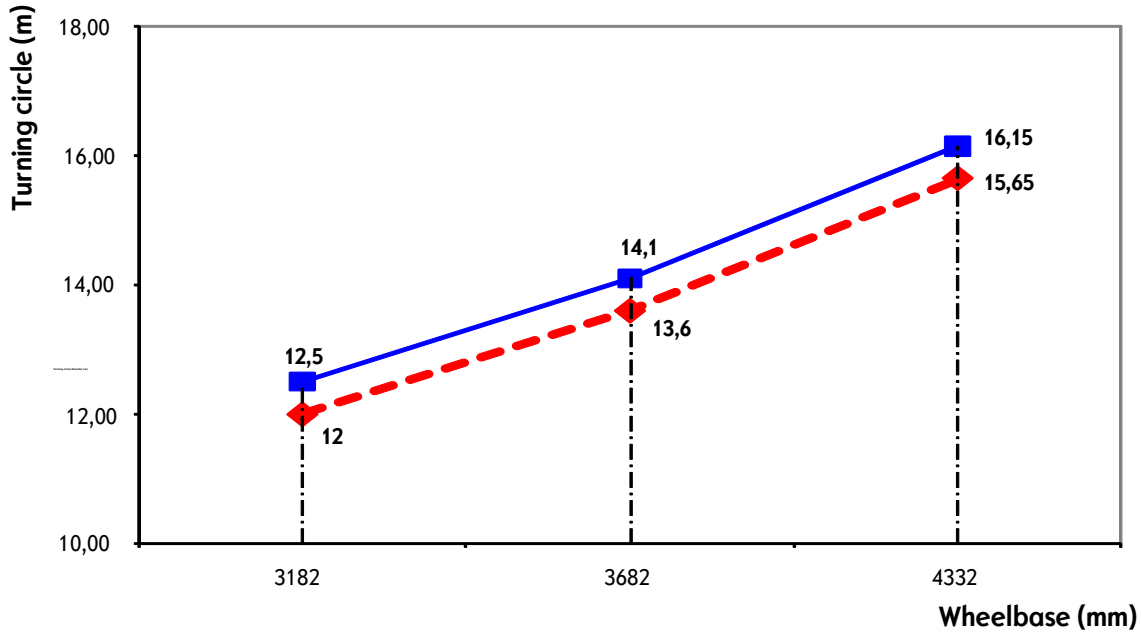
Version	Drive	GVW [kg]	Rear wheels	Tyre size	Rim size
Panel van	FWD	2800	Single	215/65 R 16 C 109/107R	6 1/2Jx16/ET66
Panel van	FWD	3300	Single	215/65 R 16 C 109/107R	6 1/2Jx16/ET66
Panel van + Chassis cab + Crew cab + Platform cab	FWD	3500	Single	225/65 R16C (112/110)R	6 1/2Jx16/ET66
Panel van + Chassis cab + Crew cab	RWD	3500	Single	235/65 R16C (115/113)R	7Jx16/ET66
Panel van + Chassis cab + Crew cab	RWD	3500	Twin	195/75 R16C (107/105)T	5 1/2Jx16/ET117
Panel van + Chassis cab + Crew cab	RWD	4500	Twin	195/75 R16C (107/105)T	5 1/2Jx16/ET117

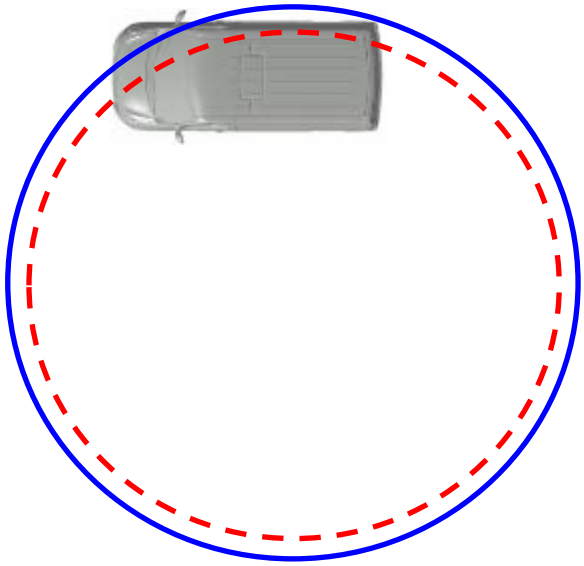
1.8.2 TURNING CIRCLE

Kerb-to-kerb and wall-to-wall turning circle diameters are given for the different wheelbases.

	Front wheel drive			Rear wheel drive	
	L1	L2	L3	L3	L4
Wheelbase (mm)	3182	3682	4332	3682	4332
Kerb-to-kerb turning circle diameter (m)	12	13,6	15,65	13,6	15,65
Wall-to-wall turning circle diameter (m)	12,5	14,1	16,15	14,1	16,15

Turning circle diametres in relation to wheelbase





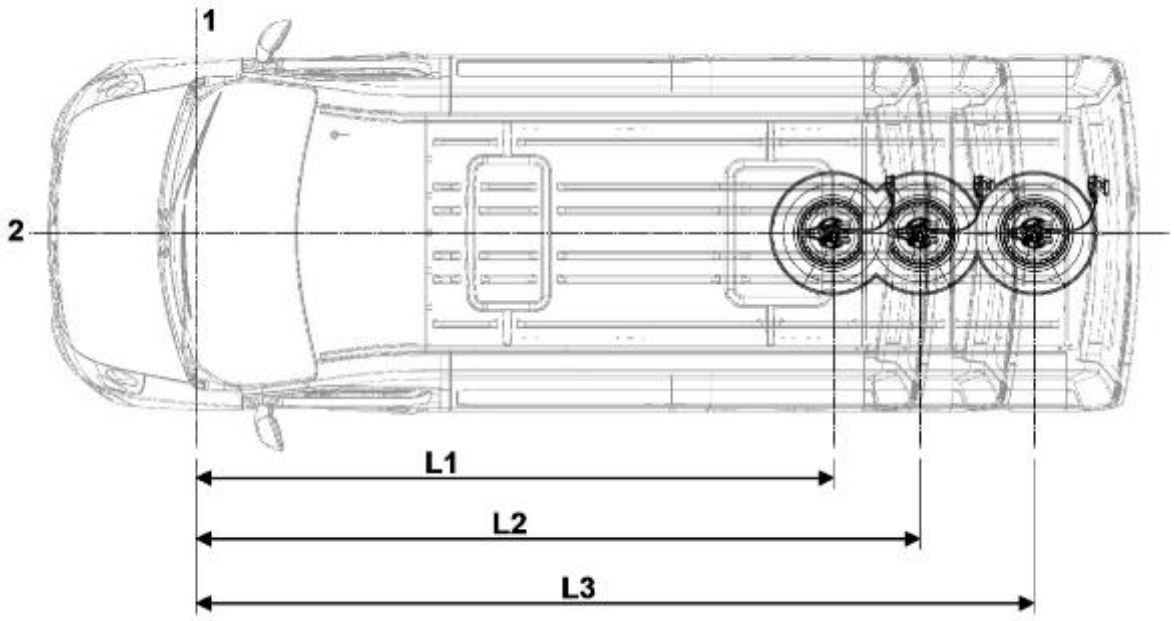
1.8.3 SPARE WHEEL

Position spare wheel

The spare wheel is held under the vehicle frame using a winch and secured by tightening a cable using the wheel wrench and adapter.

Some vehicles are equipped with a tyre repair kit instead of a spare wheel.

Panel van and platform chassis



1= front axle, 2 = centre axle

Distance between front axle and spare wheel axle by wheelbase:

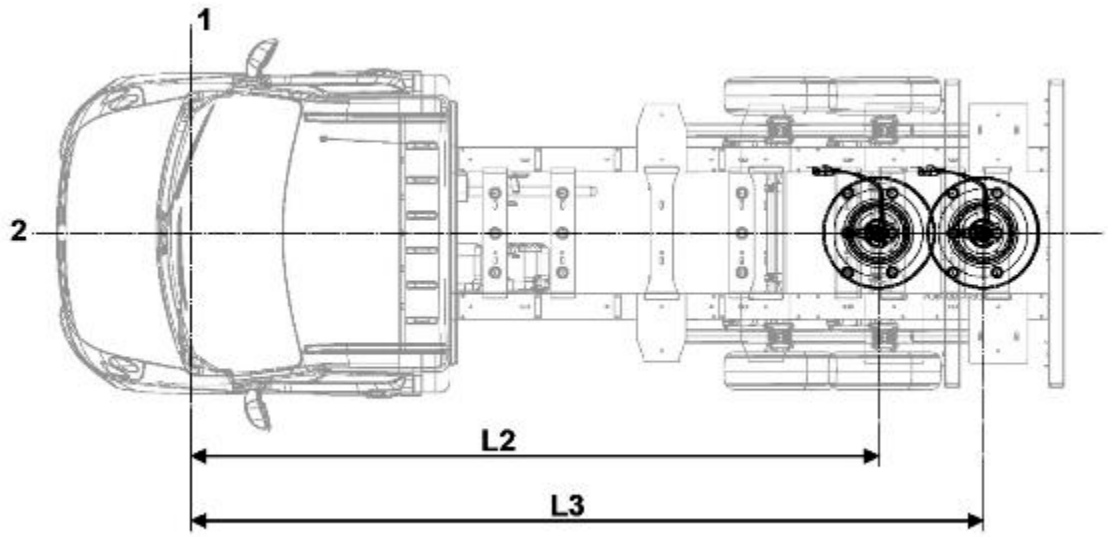
L1 = 3,613mm

L2 = 4,113mm

L3 = 4,763mm

If the overhang is extended or modified the spare wheel remains in its place.

Chassis cab with front wheel drive



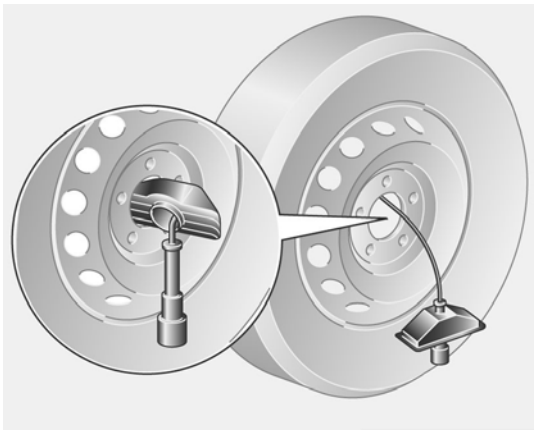
1 = front axle, 2 = centre axle

Distance between front axle and spare wheel axle by wheelbase:

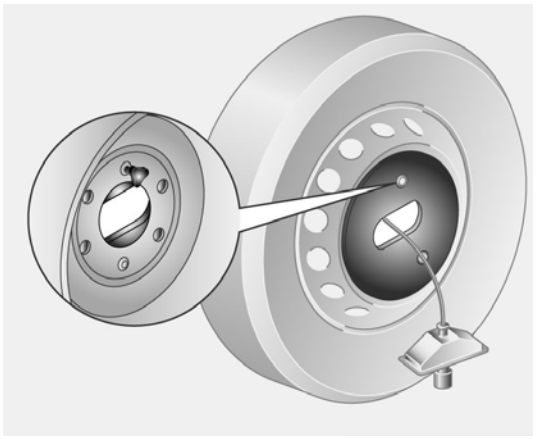
L2 = 4,300mm

L3 = 4,950mm

Assembly spare wheel with winch



Spare wheel at single wheel vehicles
(without mounting plate)



Spare wheel at twin wheel vehicles
(with mounting plate)

Twin wheel vehicles have an additional mounting plate attached to the spare wheel. Before using the wheel, undo the nut and remove the mounting plate. When reinstalling a spare wheel, attach the mounting plate and secure with the nut.

When installing a spare wheel, route the cable from the back and through the centre of the wheel. Attach the retainer and pin, ensuring it is correctly positioned and that the front of the wheel will be facing downwards. Tighten cable using the wheel wrench and adapter until the wheel is secured.

Caution:

- We remind you that the usage of pneumatic and electric tools provokes the destruction of the winch.
- This winch must be manually used.

1.9 SUSPENSIONS/ BRAKING/ REAR WHEEL FREE TRAVEL

1.9.1 SUSPENSIONS

Rear suspension

The vehicle's rear suspension is created by leaf springs coupled to hydraulic shock absorbers. All rear wheel drive vehicles and some front wheel drive versions also have an anti-roll bar.

The definition of the leaf springs varies depending on the type of vehicle and the gross vehicle weight (GVW).

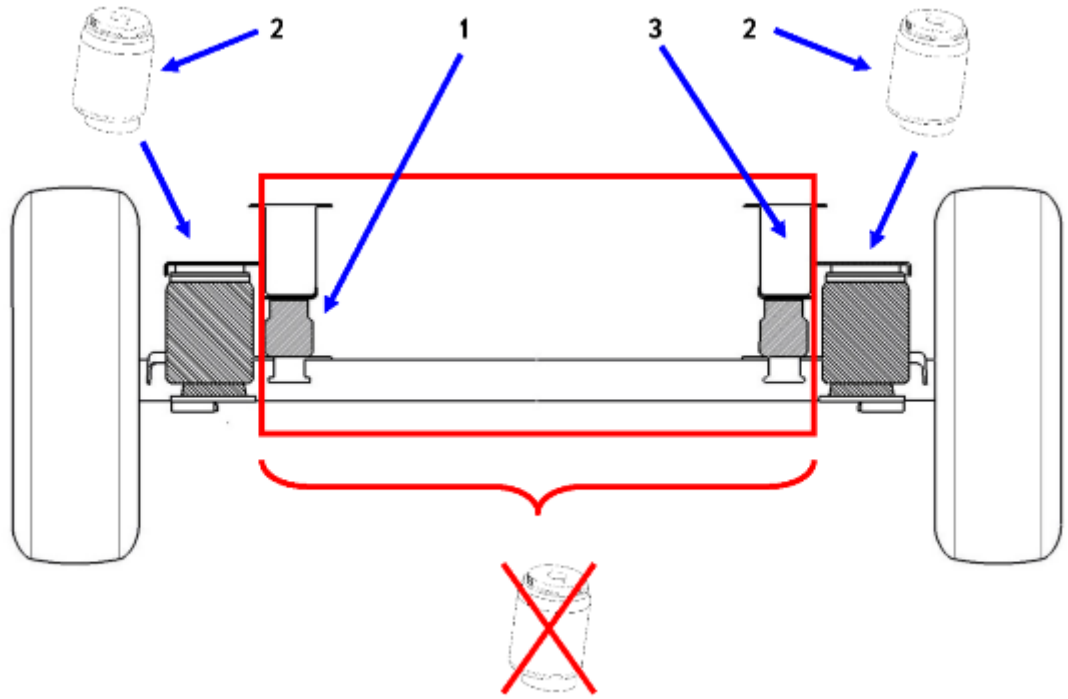
Note:

Regardless of the suspension type, it is prohibited to add an additional air cushion in the bump stop area and between the side members (Area surrounded in RED in the figure below), in order not to increase the flexing forces in the axle (reliability impact).

A reception structure, dimensioned to support cushions/body interface forces, must be provided.

Regardless of the vehicle, do not touch the original bump stops, which are suspension parts with two functions:

- Bump stop
- Suspension function



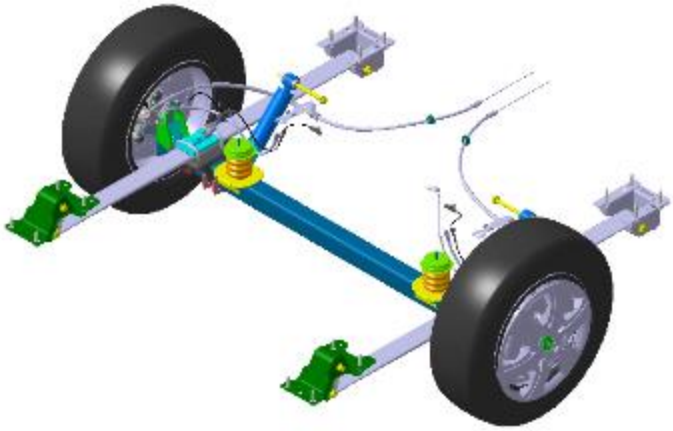
Pos.	Description
1	Bump stop of the vehicle
2	Air bellows
3	Frame longitudinal member

Front wheel drive vehicles

All front wheel drive vehicles are fitted with one single steel leaf spring.

Rear axle for panel van and chassis cabs

The rate of the single spring, flanged in the centre and with no articulation, is 71.7N/mm.



Rear axle for camper vans (with normal and widened tracks)

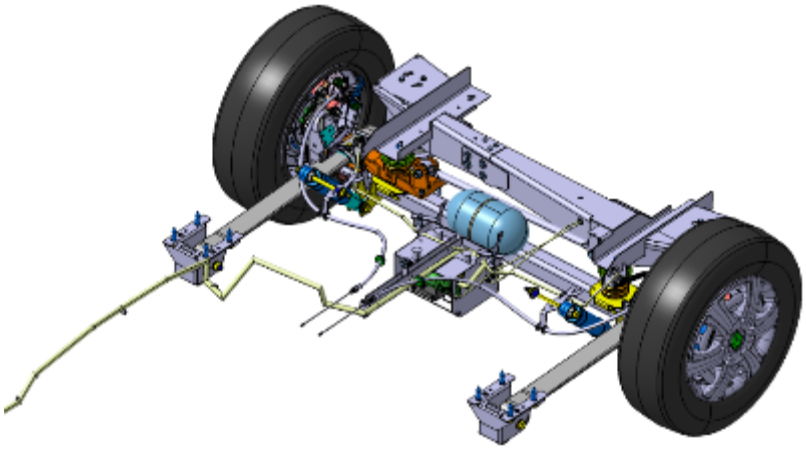
Special campervan versions with widened tracks for which the rate is 100.9N/mm.

Note:

The widened track is strictly reserved for camper vans. It is prohibited to fit this axle to any other conversion.

Rear axle with pneumatic suspension

This is a factory option it is only available for panel vans and front wheel drive chassis cabs.



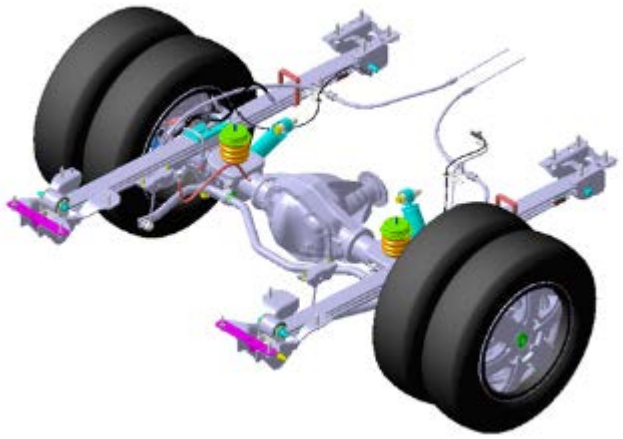
Rear wheel drive vehicles, single wheels

All single wheel rear drive vehicles are fitted with two steel leaf springs.

The rate of the single spring flanged in the centre and with no articulation, is 89.08N/mm for a deflection of 0 to 80 mm and 121.14N/mm for a deflection of 80 to 180 mm. The origin of the travel corresponds to the spring in free state.

Rear wheel drive vehicles, twin wheels

All twin wheel rear drive vehicles are fitted with three steel leaf springs.



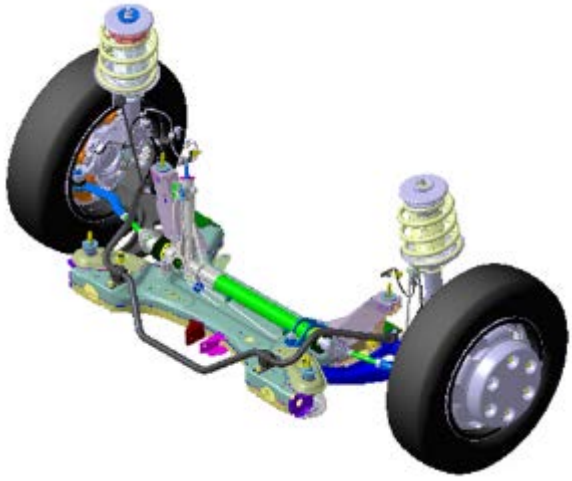
The rate of the single spring flanged in the centre and with no articulation, is 72.25N/mm for a deflection of 0 to 100 mm and 166.22N/mm for a deflection of 100 to 200mm. The origin of the travel corresponds to the spring in free state.

Front suspension

The front suspension is a McPherson strut type suspension.

All rear wheel drive vehicles and some front wheel drive versions also have an anti-roll bar.

The coil spring rate is 56N/mm.



If the anti-roll bar is absent

Front axle

	X62 no anti-roll bar on rear axle						
	Front wheel drive	Rear wheel drive	Wheelbase [mm]	Height	Twin wheels	ESP	GVW [kg]
Panel van	X		3182	H1, H2	No		2800
Panel van	X		3182				2800

Rear axle

	X62 without anti-roll bar on rear axle						
	Front wheel drive	Rear wheel drive	Wheelbase [mm]	Height	Twin wheels	ESP	GVW [kg]
Panel van	X		3182	H1	No		2800 3300 3500
Panel van		X	3682	H2, H3	No	X	3500
Panel van	X		3182	H2	No		
Panel van	X		3682	H2	No		3300
Combi	X		3682	H2	No		3300
Combi	X		3182	H1	No	X	2800

1.9.2 BRAKING

Regardless of the version, there is only one 10" brake assist system.

The brake assist is located on the left for left-hand drive vehicles and on the right for right-hand drive vehicles.

All vehicles are equipped with ABS and ESP **serially**.

For more information, see also chapter 4.1.3.

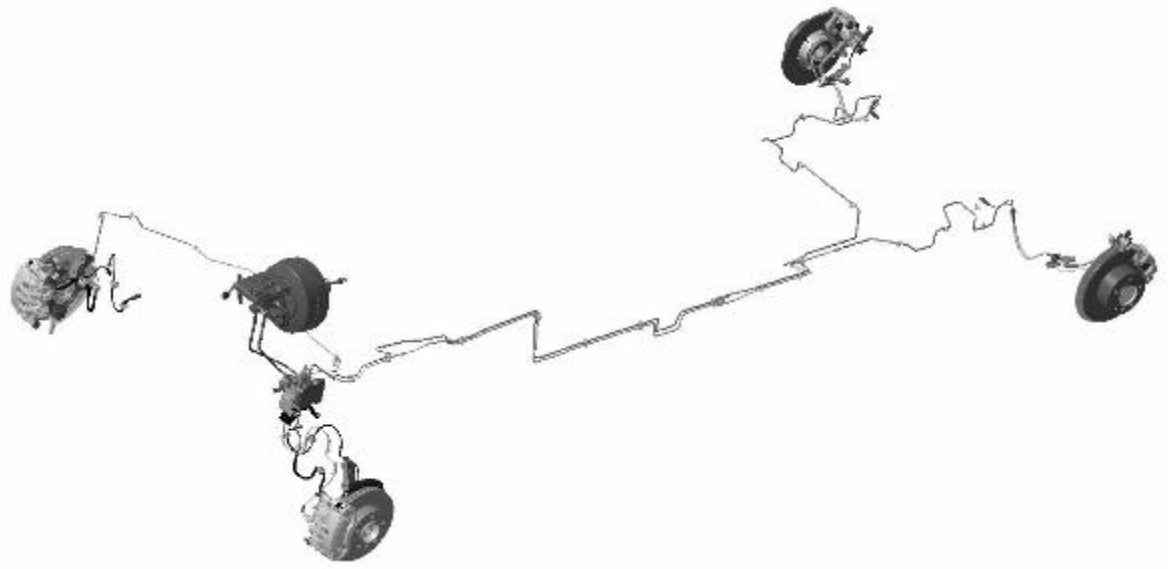
Note:

- A sufficient distance must be maintained between brake lines and heat sources, sharp-edged or moving parts.
- If the routing of the brake hoses, lines and cables has to be altered, avoid routing across sharp edges and through narrow cavities or near moving components
- No other lines may be attached to brake hoses.
- The brake cables must be routed without kinks.
- Cover plastic lines, brake hoses and brake cables before carrying out any welding, drilling and grinding work or before working with cutting discs. If necessary, the plastic lines, brake hoses and brake cables should be removed.

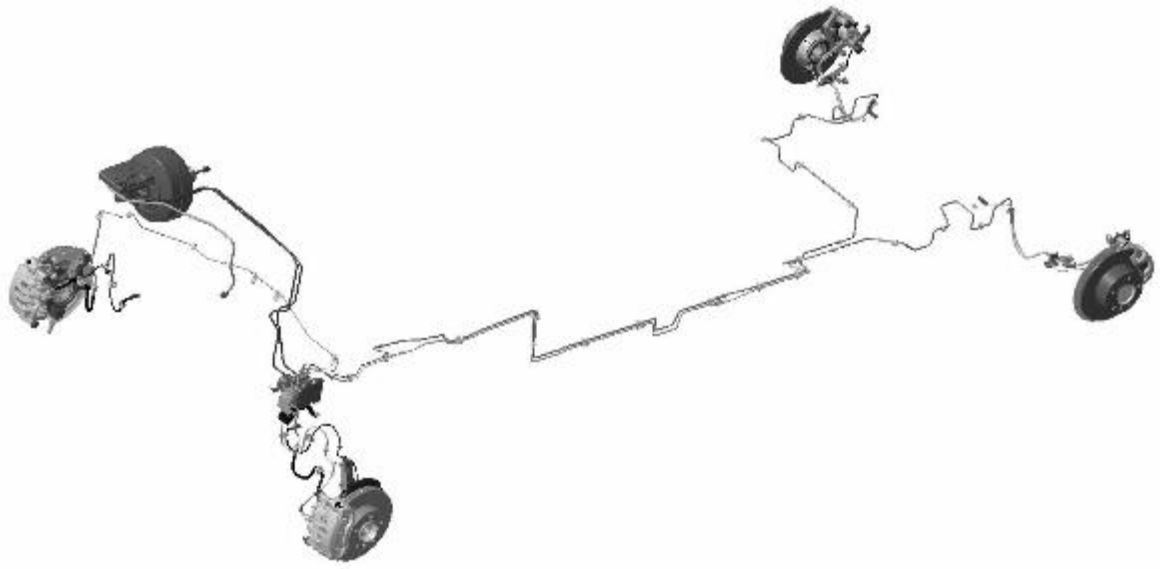
Caution:

- There is an operating permit for all types of braking systems. An amendment of the braking system leads to the expiration of the operating permit.
- On no account should modifications be made to brake callipers, discs, sensors etc. Any modifications to brake components may result in these systems not functioning correctly and ultimately failing.
- The ESP option is not compatible with large-scale bodywork modifications and prohibits any major modifications to the vehicle's load distributions or centre of gravity. See also chapter 3.1.
- Work carried out incorrectly on the brake hoses, lines and cables may impair their function. This may lead to the failure of components or parts relevant to safety.

Left-hand drive braking system

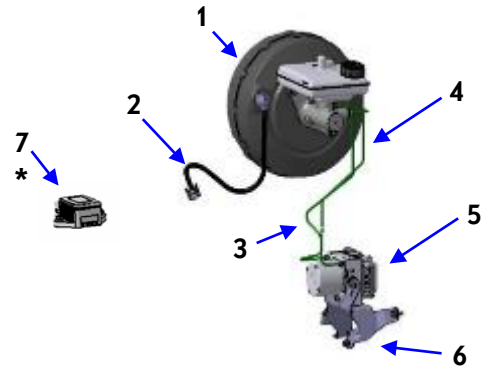


Right-hand drive braking system

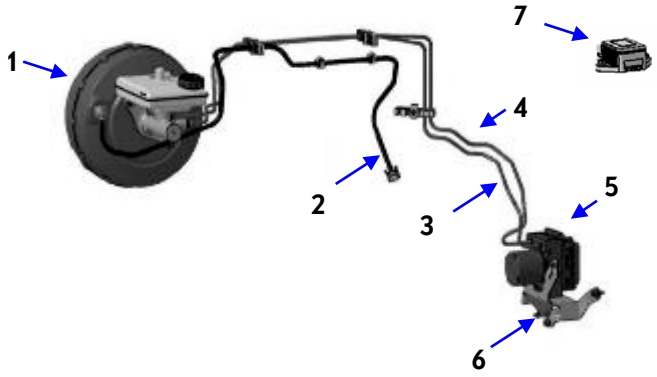


Master cylinder and hydraulic block

Left-hand drive



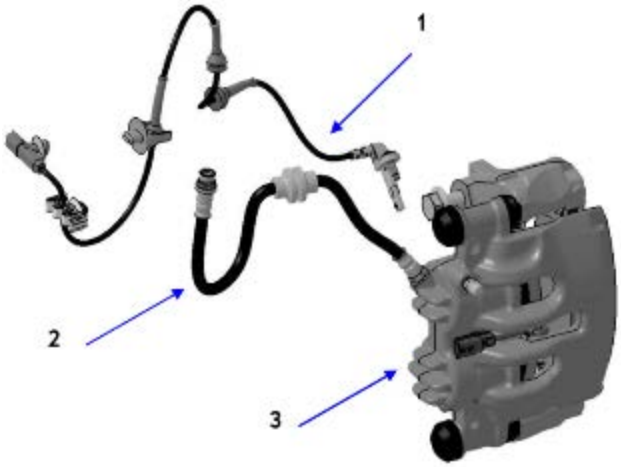
Right-hand drive



Pos.	Description
1	Master cylinder and ESP/Emergency brake assist booster M/CYL 10/10 27-0
2	Left power brake system pipe
3	Primary master cylinder rigid tube – ABS/ ESP
4	Secondary master cylinder rigid tube – ABS/ ESP
5	ABS/ ESP-Hydraulic Block
6	ABS/ ESP-Hydraulic block support
7	ESP-sensor

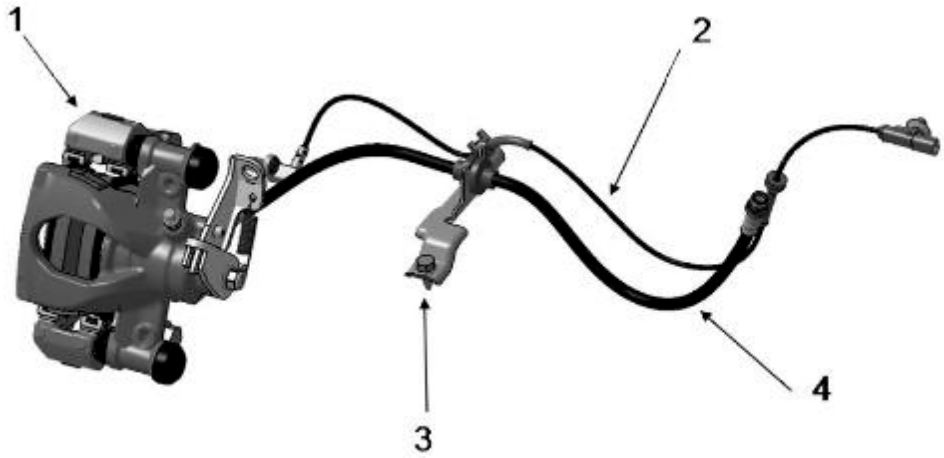
Sensor calliper

Example: left front wheel – all types



Pos.	Description
1	Front wheel speed sensor
2	Brake hose
3	FR RH brake disc (Diam 48/48 DSQ 302x28)

Example: left rear wheel – all types



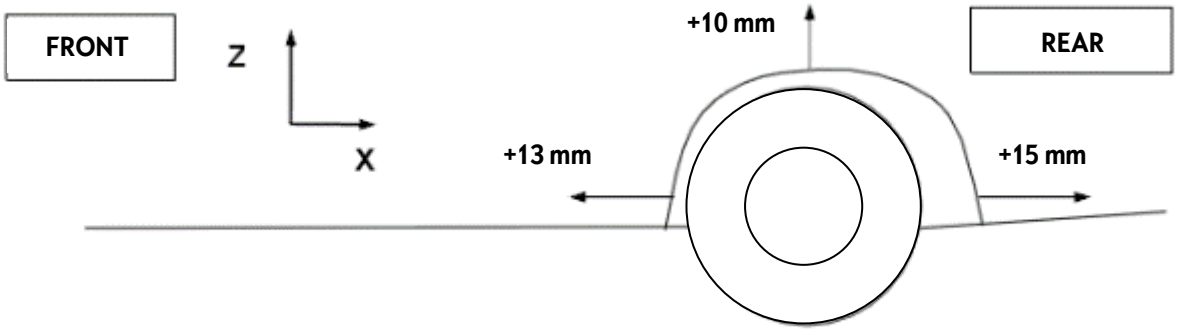
Pos.	Description
1	RR LH brake disc (Diam 48 DSQ 305/12)
2	RR wheel speed sensor
3	Hose support lug
4	Brake hose

1.9.3 REAR WHEEL FREE TRAVEL

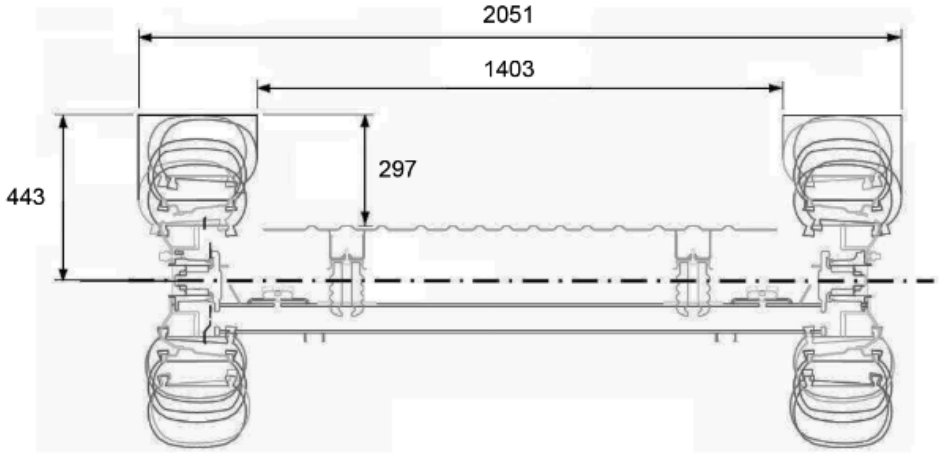
The cross section is given with an asymmetrical travel, with first fit tyres and bump stops pressed down as far as possible. A clearance of 10mm must be added in relation to the tyre for any bodywork positioning. Additional clearance may be needed for fitting snow chains.

Note:

- Refer to the bodyshop technicians' drawings for chassis cabs.
- The wheelbase of a vehicle with an increasing load varies with the kinematics of the rear axle.
- To optimise the wheel arch of open transport vans, 5mm should be added behind and 3mm in front of the rear wheels, in unladen position.

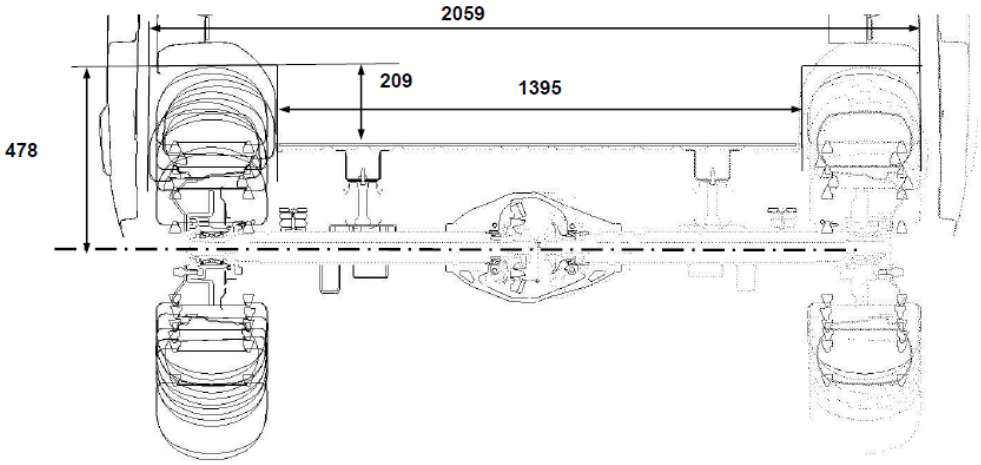


REAR AXLE of PLATFORM CAB and PANEL VAN (FWD)



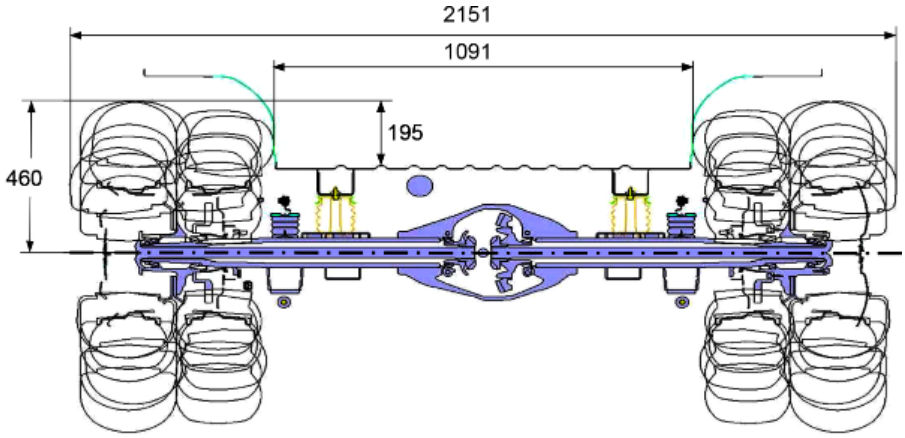
REAR AXLE of PANEL VAN (RWD)

(single wheels)



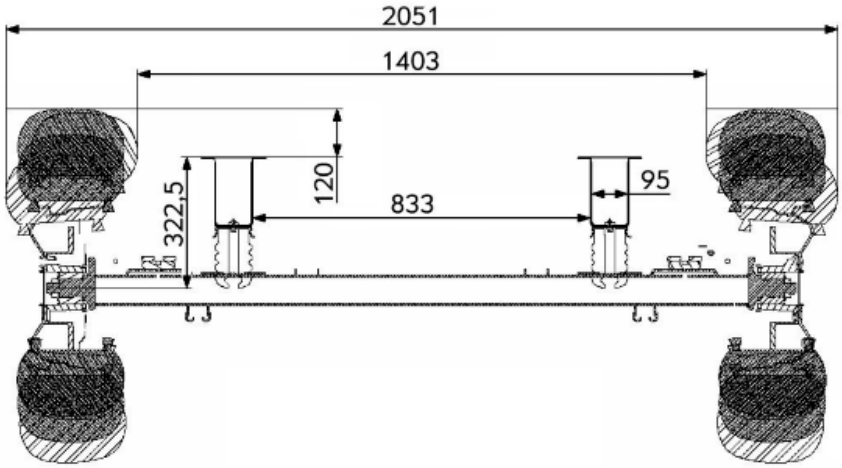
REAR AXLE of PANEL VAN (RWD)

(Twin wheels)



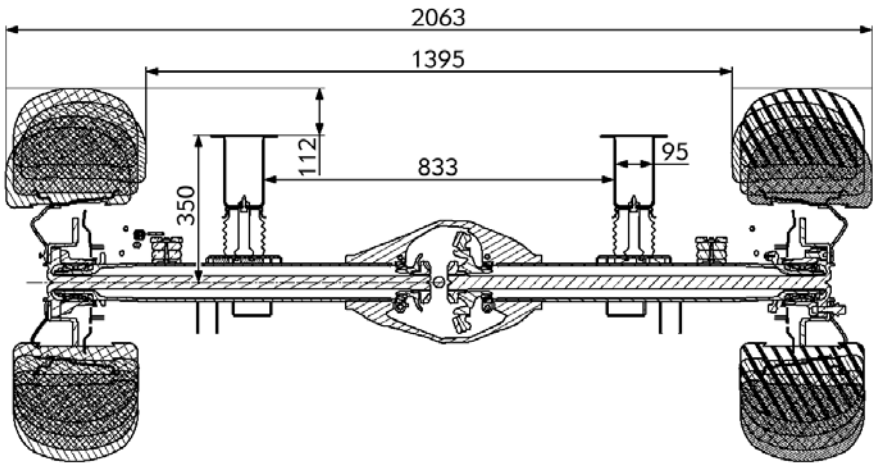
REAR AXLE of PLATFORM CAB (FWD)

(Chassis cab and crew cab)



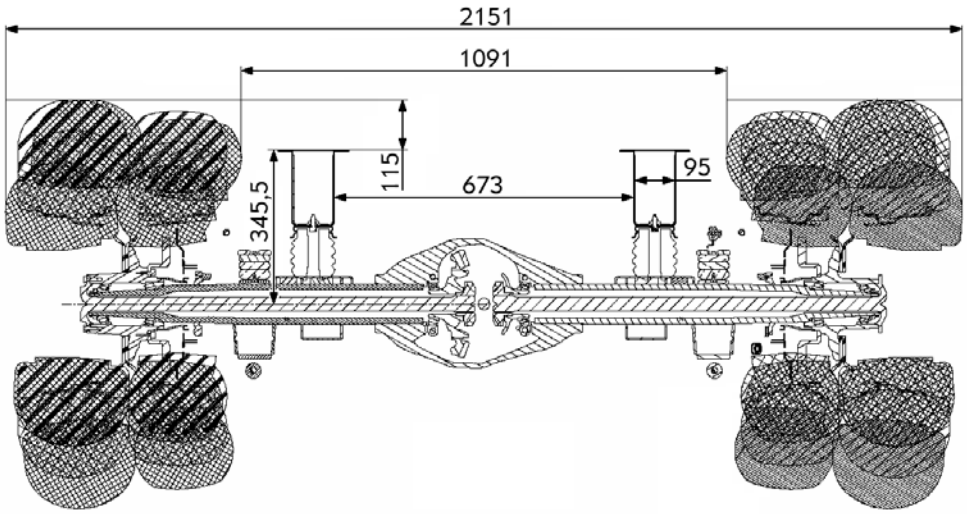
REAR AXLE of PLATFORM CAB (RWD)

(Chassis cab and crew cab, single wheel)



REAR AXLE of PLATFORM CAB (RWD)

(Chassis cab and crew cab, twin wheel)



1.10 FUEL SUPPLY SYSTEM

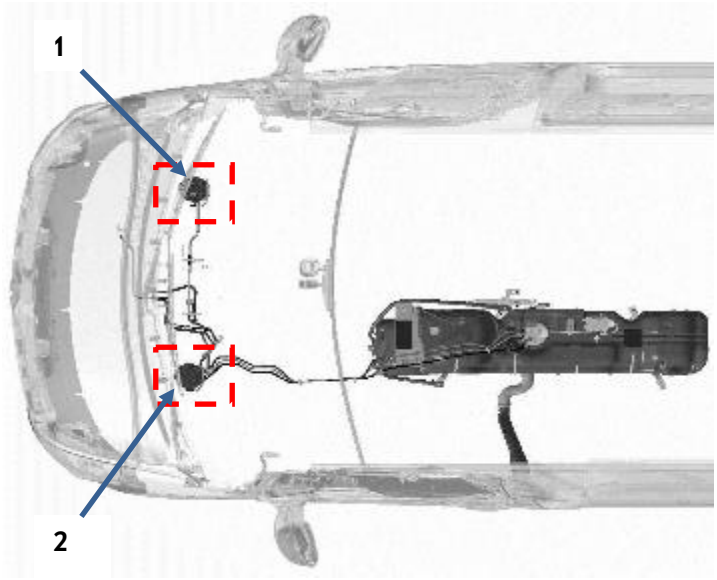
1.10.1 FUEL TANK

The mass production vehicle is delivered with an 80 litre fuel tank. A fuel tank with a capacity of 100 litres is available as an option. From the outside, the two tanks are identical.

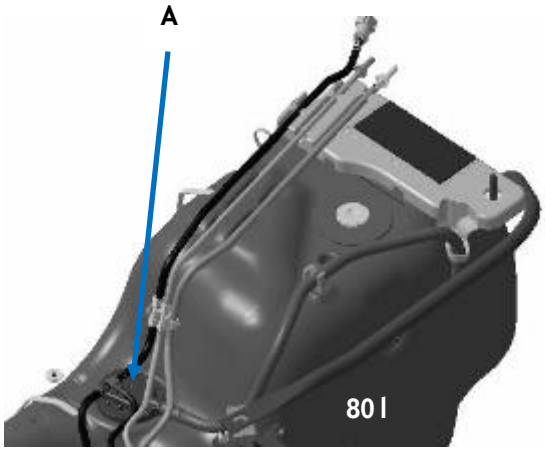
Any modification to the fuel tank will require the converter to apply for a new type approval.

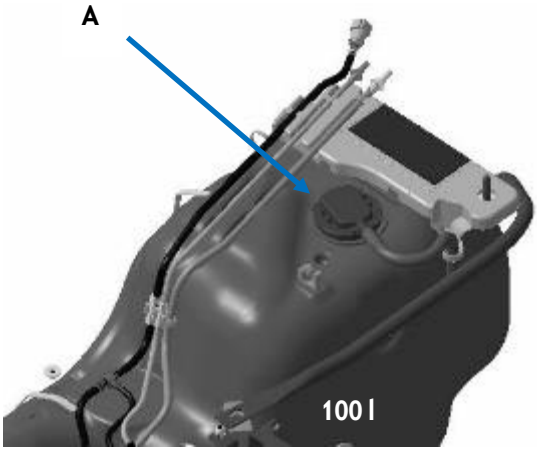
It is not possible to modify the capacity of the fuel tank.

The fuel circle for left and right hand drive only differs in the position of the diesel filter.

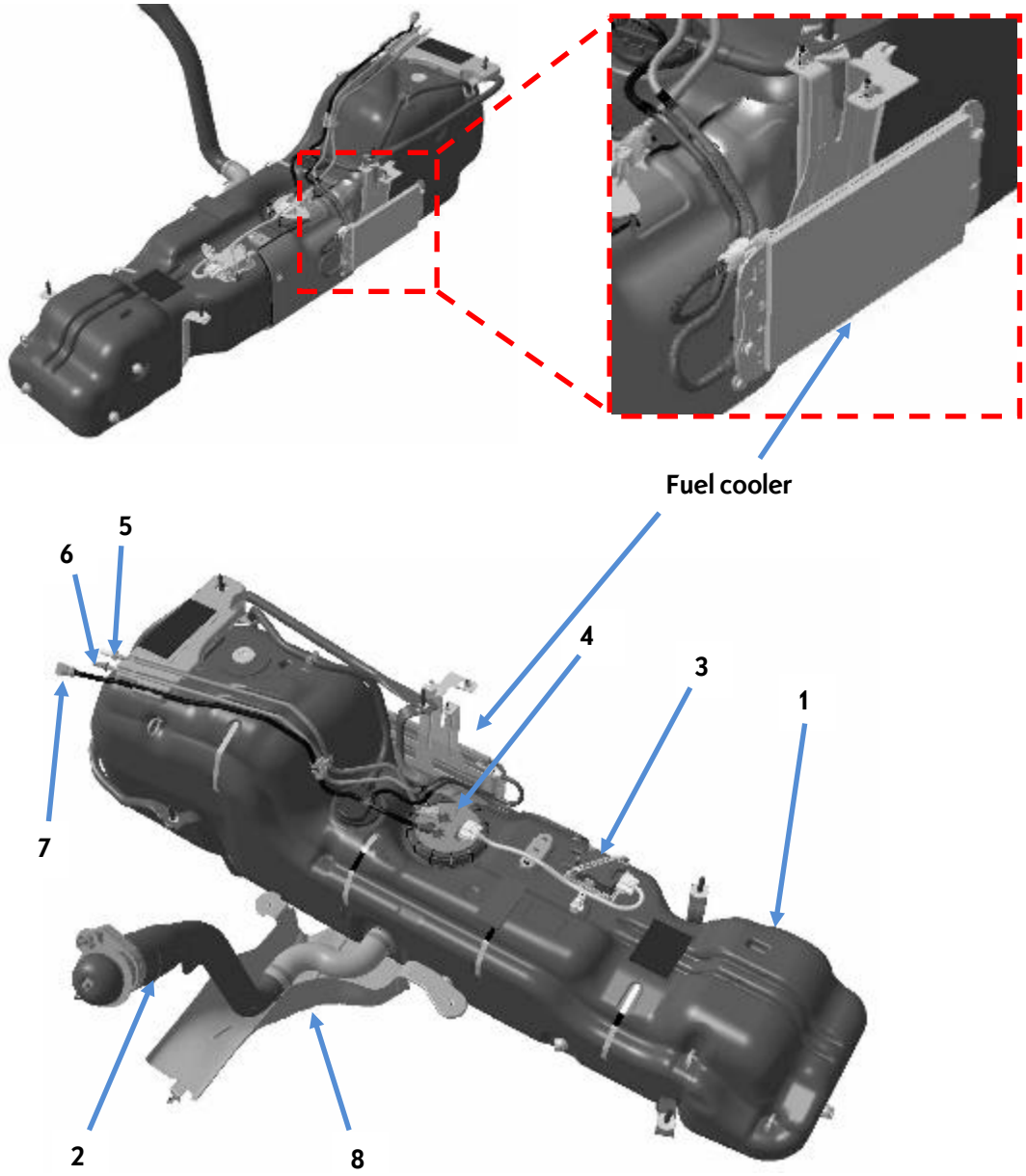


From the outside, the 80 l and the 100 l tank are identical. The only thing that differs is the position of their vent valve (A).



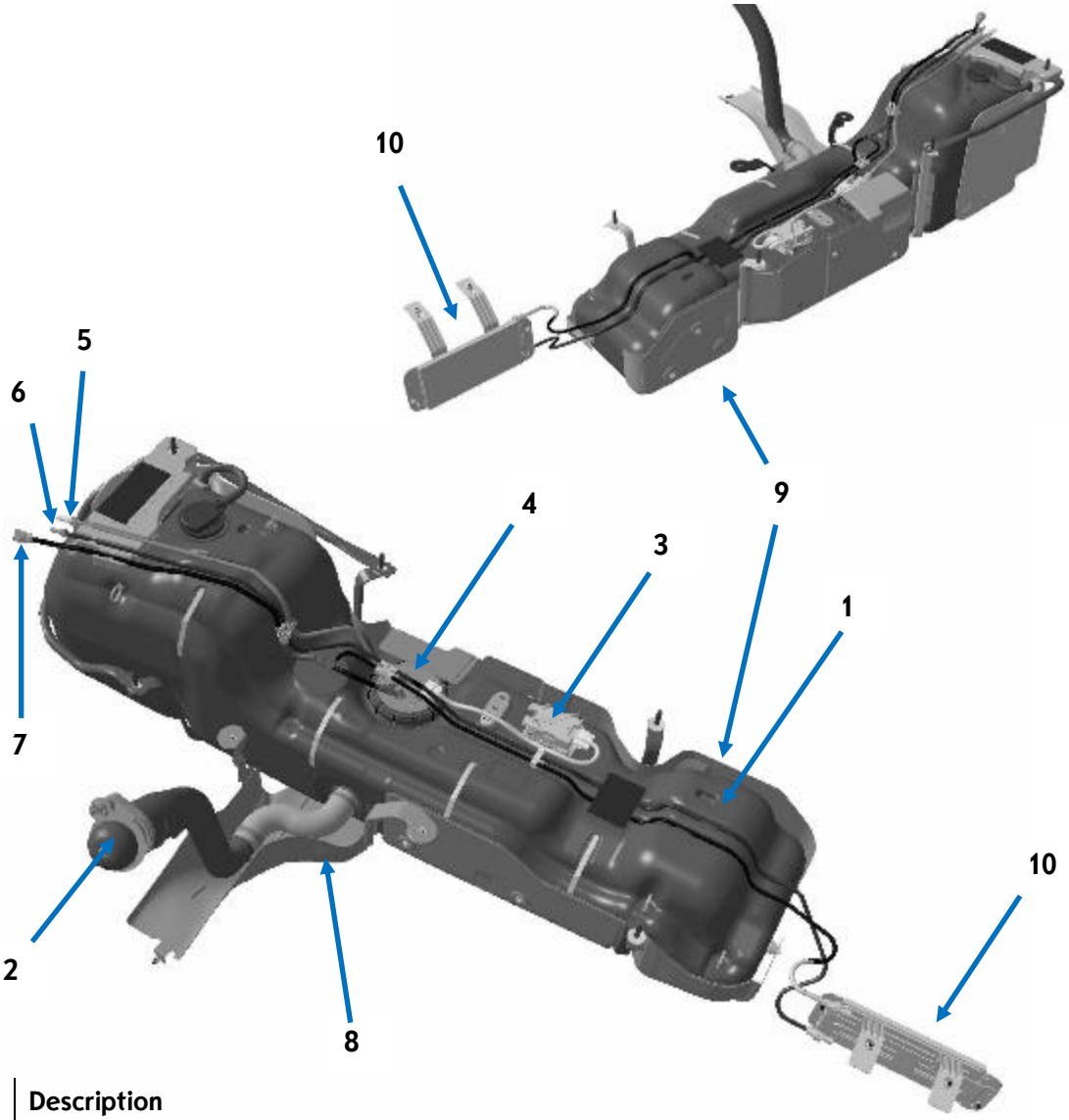


Tank models on Panel van, Combi and platform cab with front wheel drive



Pos.	Description
1	Fuel Tank
2	Filler pipe
3	* Pump control module
4	Intake assembly
5	Fuel supply pipe
6	Fuel return pipe
7	Fuel return pipe
8	Heat shield

Tank models on platform cab with front and rear wheel drive

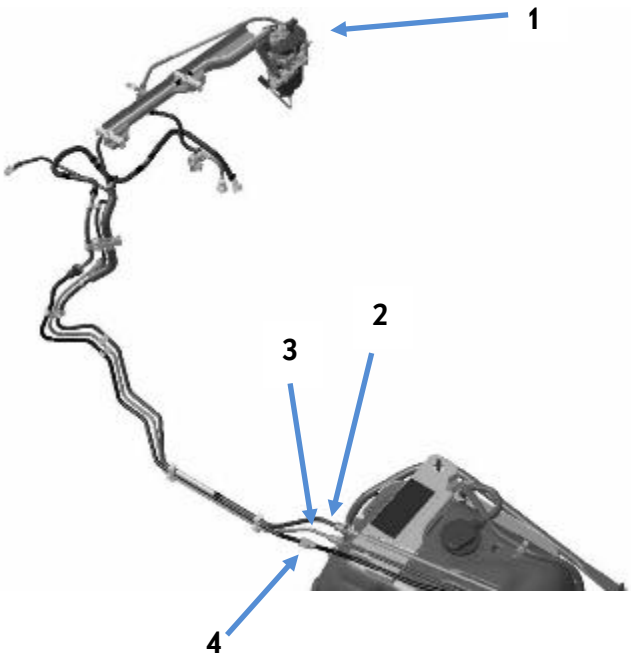


Pos.	Description
1	Fuel Tank
2	Filler pipe
3	* Pump control module
4	Intake assembly
5	Fuel supply pipe
6	Fuel return pipe
7	Fuel return pipe
8	Heat shield
9	Heat shield
10	Fuel cooler

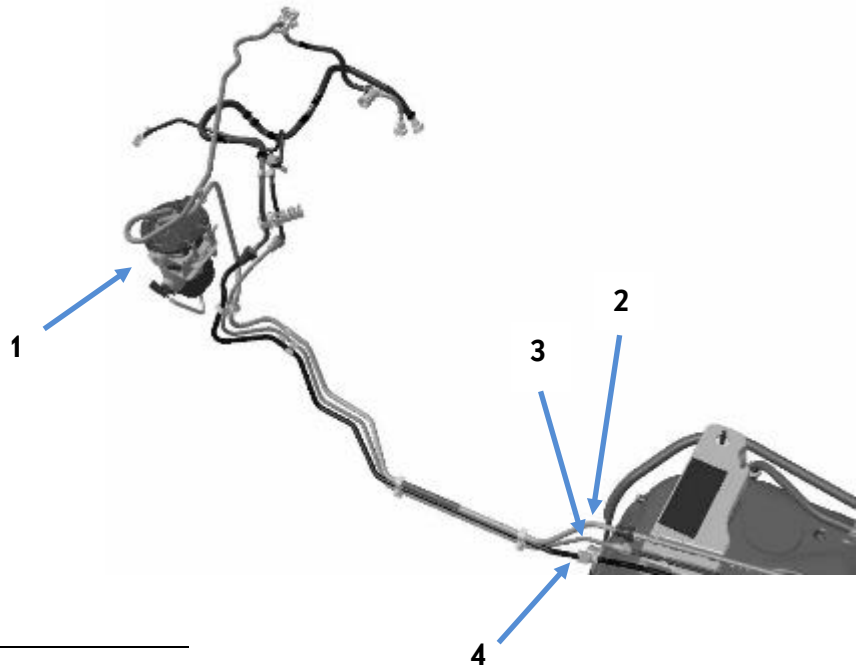
* The pump control module is supplied with 12V for models with engine Gen4 and Euro5.

1.10.2 FUEL PIPES

Left hand drive



Right hand drive

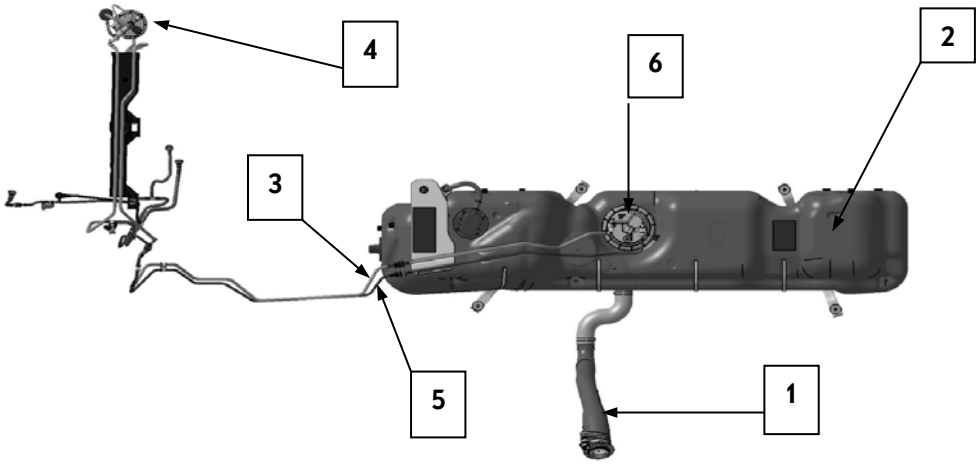


Pos.	Description
1	Diesel filter
2	Fuel supply pipe
3	Fuel return pipe
4	Fuel return pipe

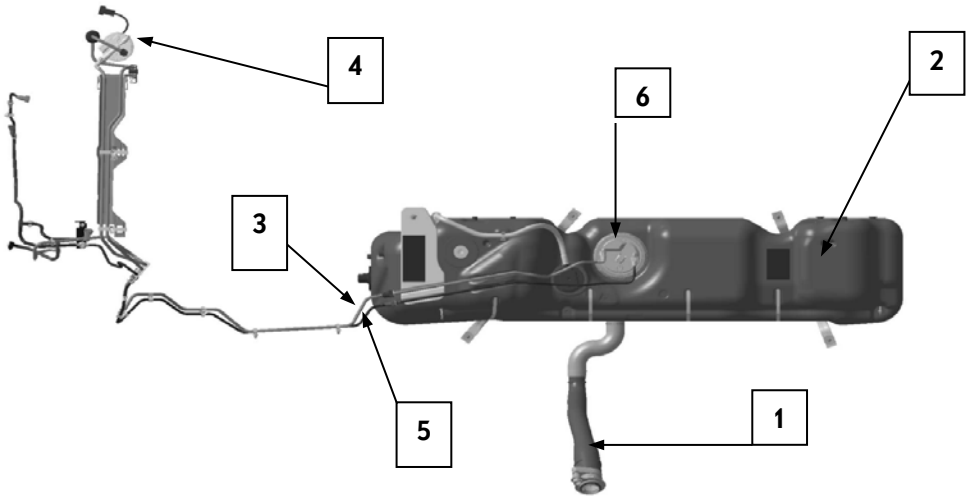
Fillerpipe overview for anterior engine versions

Left hand drive

100 and 80 litre fuel tank – REAR WHEEL DRIVE



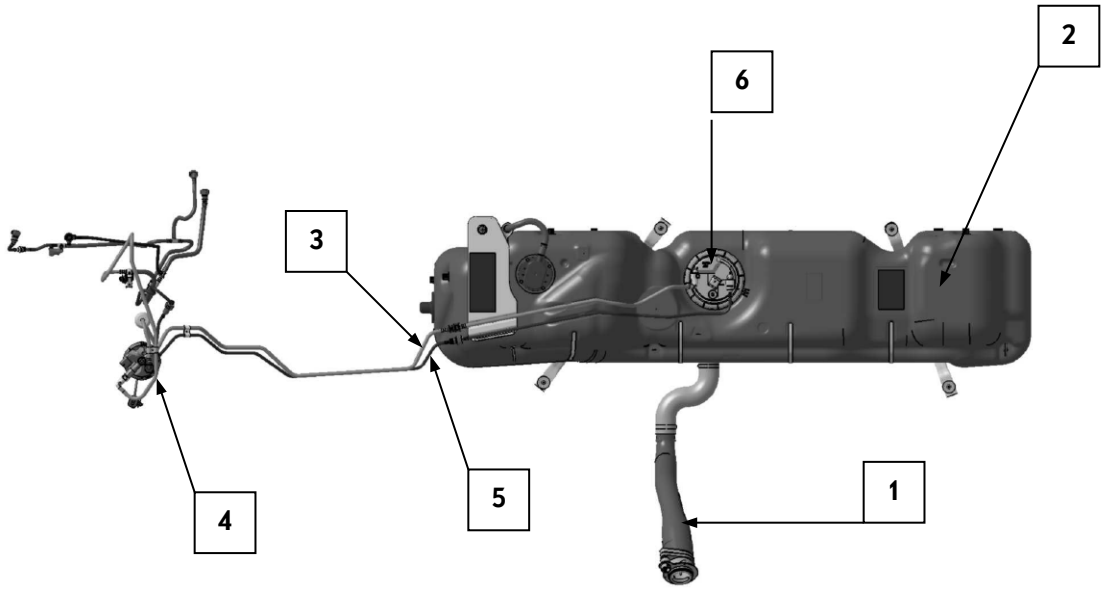
100 and 80 litre fuel tank – FRONT WHEEL DRIVE



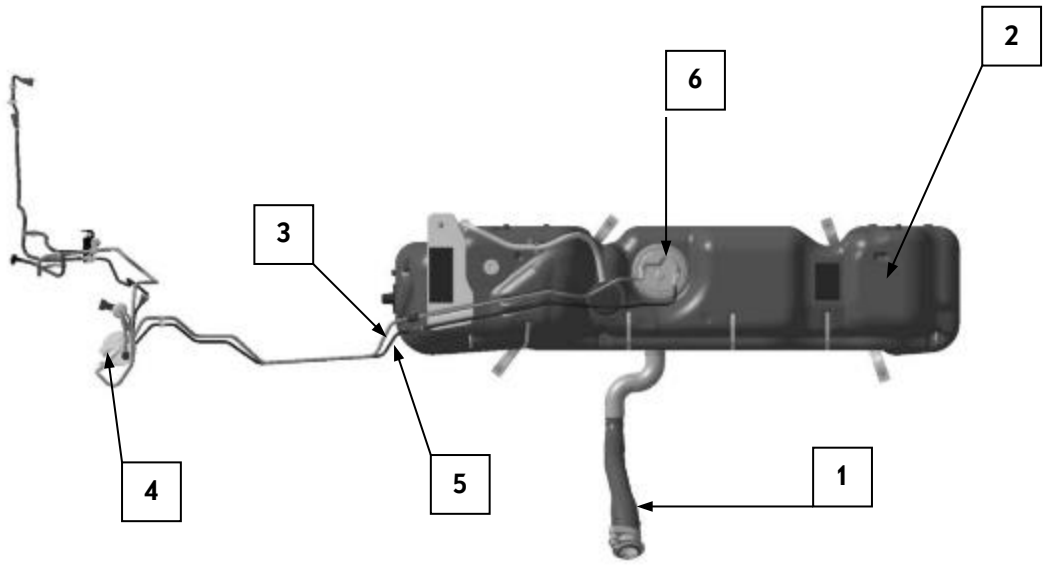
Pos.	Description
1	Filler pipe
2	Tank
3	Engine supply pipe
4	Diesel filter
5	Vapour absorber pipe
6	Intake assembly

Right hand drive

100 and 80 litre fuel tank – REAR WHEEL DRIVE



100 and 80 litre fuel tank – FRONT WHEEL DRIVE



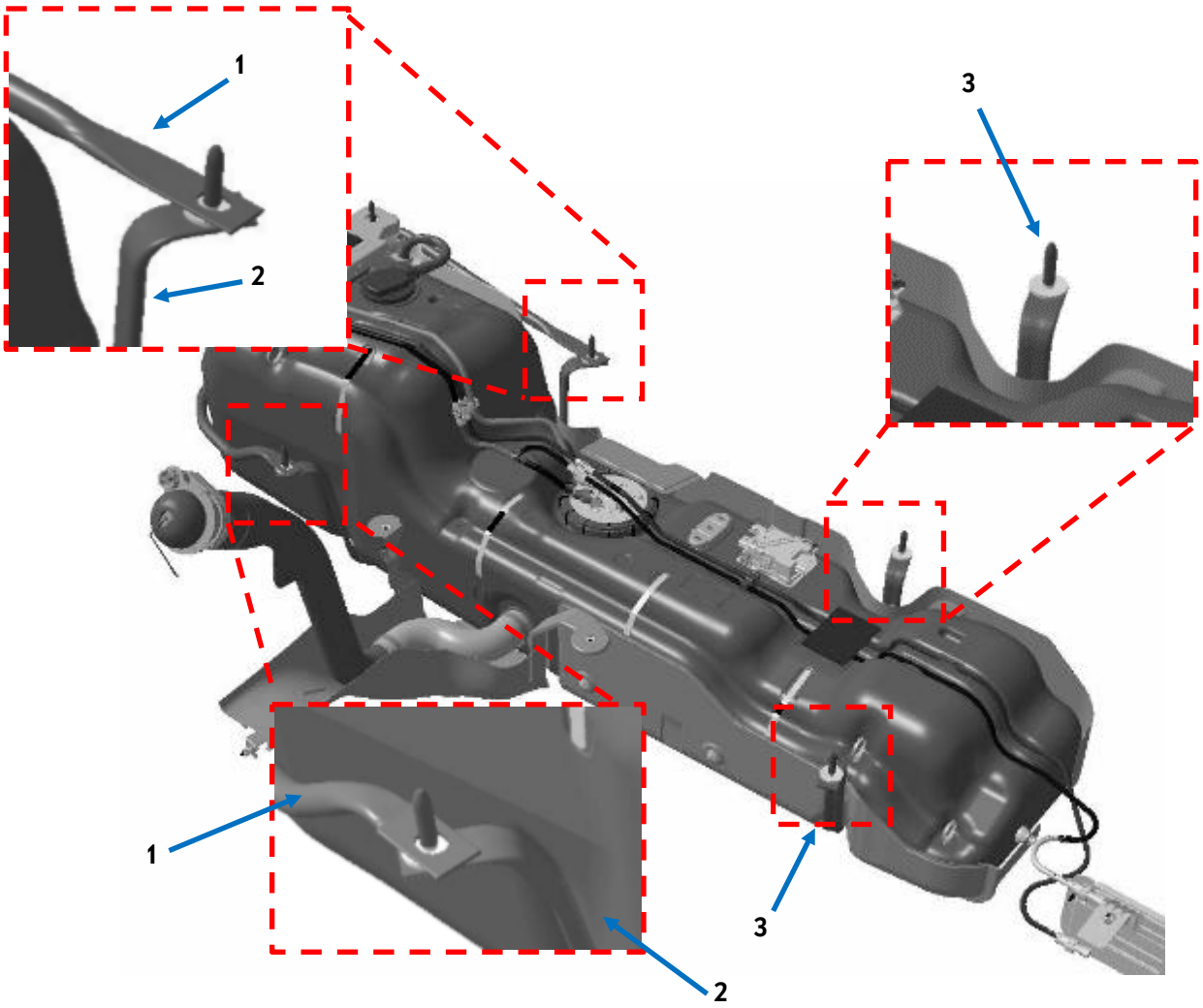
Pos.	Description
1	Filler pipe
2	Tank
3	Engine supply pipe
4	Diesel filter
5	Vapour absorber pipe
6	Intake assembly

1.10.3 PRECAUTIONS FOR ASSEMBLY AND DISASSEMBLY OF FUEL TANK

Caution:

If disassembling and re-assembling the fuel tank, it is essential to maintain the assembly order of the fuel tank straps on the front zone.

The vertical strap **(1)** must be positioned **above** the strap **(2)** that holds the fuel tank in place.



Pos.	Description
1	Vertical strap
2	Front support strap
3	Rear support strap

1.10.4 REGULATORY TANK GUARD

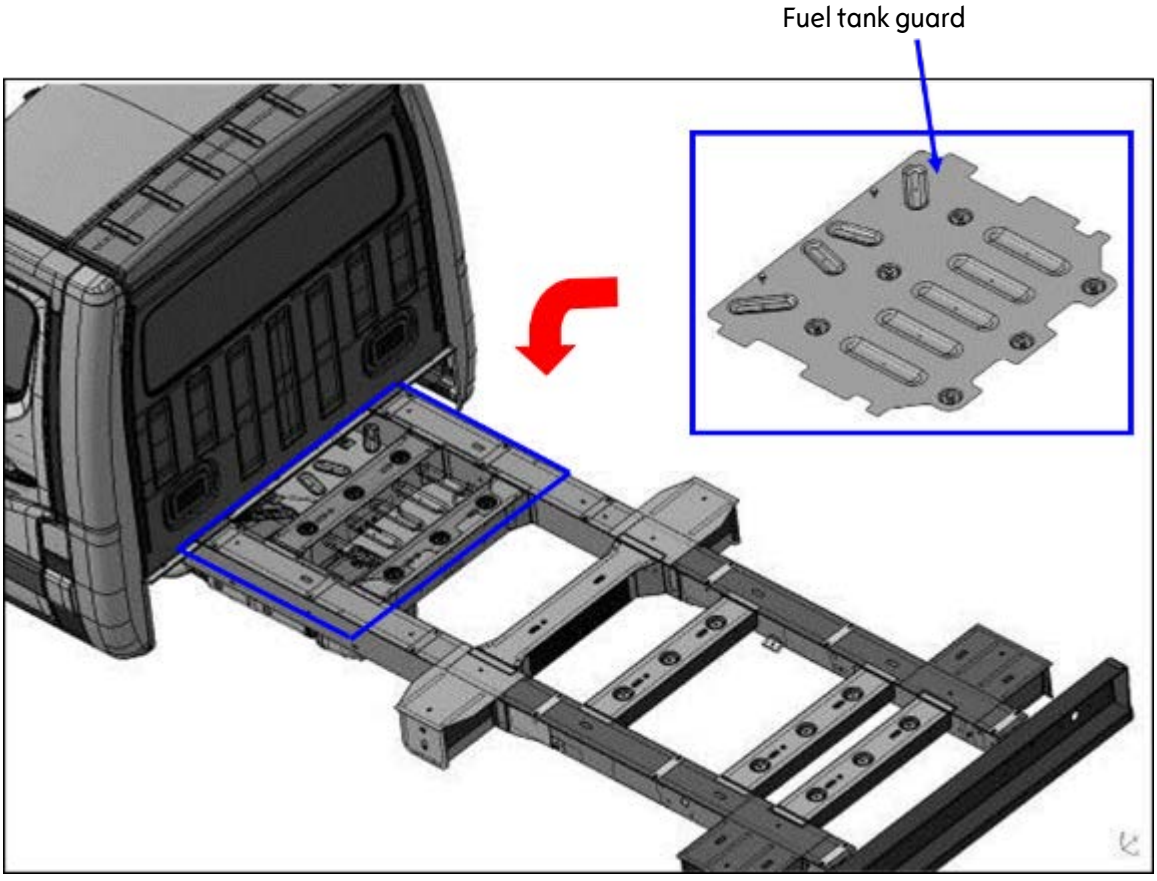
Caution:

This protective guard around the tank is subject to Regulation ECE 34 and concerns the fire resistance of the fuel circuit.

Any modification or removal of this guard must comply with this directive.

For information:

- On all the CHASSIS CAB vehicles (except the double cab), carry-over of the fuel tank guard element.
- This measure is identical for TRACTION HEADS when the standard fuel tank is carried over onto a specific chassis developed by a coach-builder.



1.11 EXHAUST SYSTEM

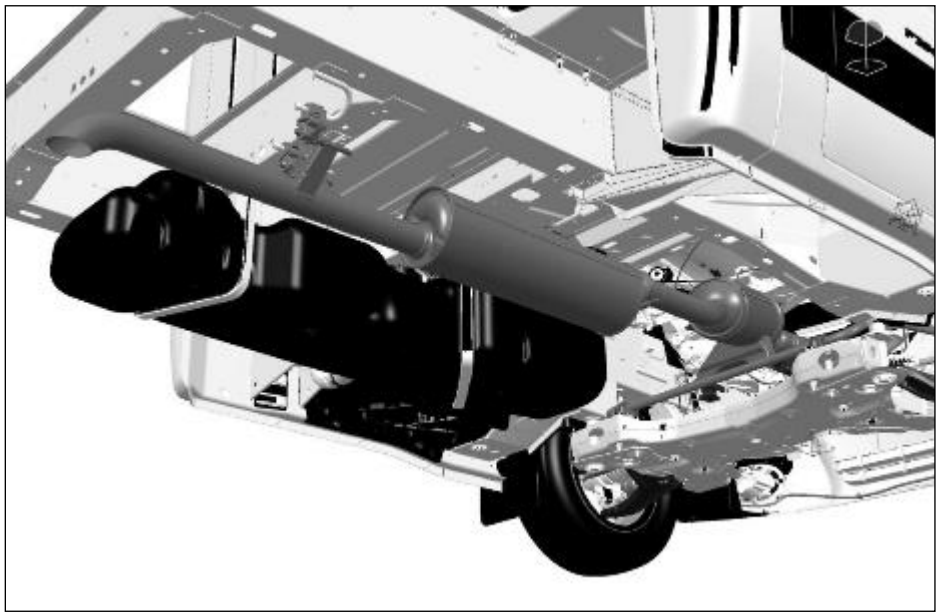
Modification of the exhaust pipe:

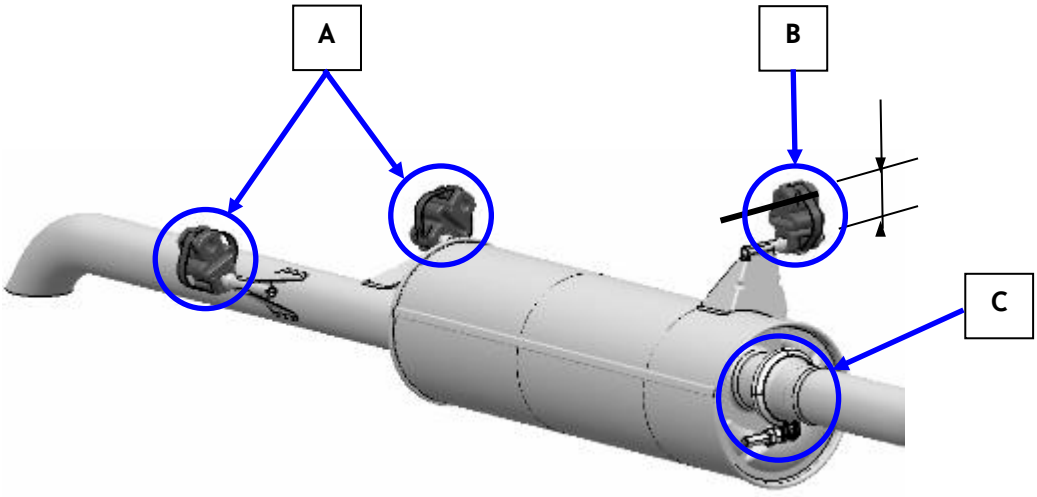
The exhaust lines for the MOVANO versions are designed for output below the vehicle.

The architecture of the MOVANO has been designed to maintain the vehicle's ground clearance and to direct the exhaust gases downwards. The exhaust system runs on the right side and it is identical for all wheelbases (L1-L3).

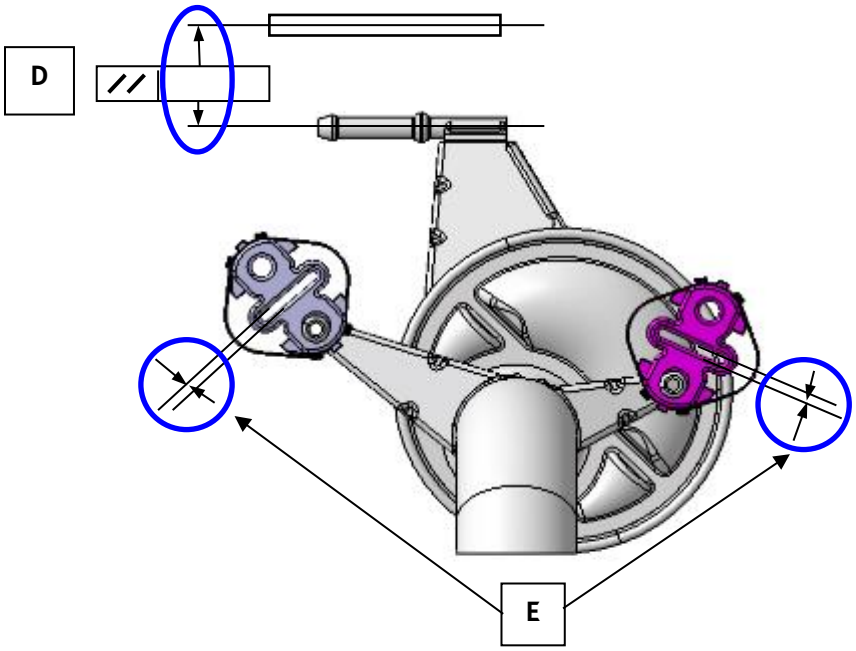
Attention:

Any modification may result in alteration of the vehicle's type approval (engine power, noise or exhaust emissions). The body builder is entirely responsible for carrying out this type approval.





Pos.	Description
1	Rear attachment of the silencers
2	Front attachment of the silencers
3	Connection clamp



Attachments A and B:

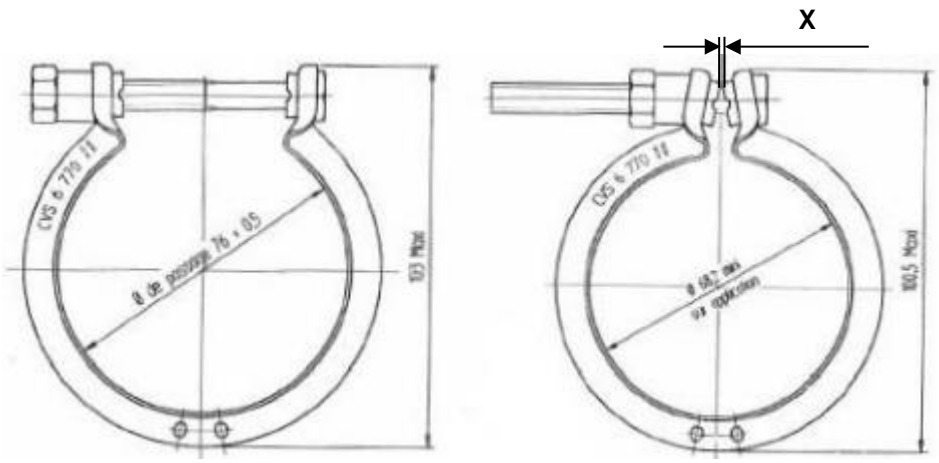
- Respect the parallelism between the 2 hooks (body and line), see reference D.
- Check that the internal clearances of the 2 flexible exhaust mounts are indeed identical, see reference E.

Connecting clamp:

The connecting clamp must be changed for a new one.

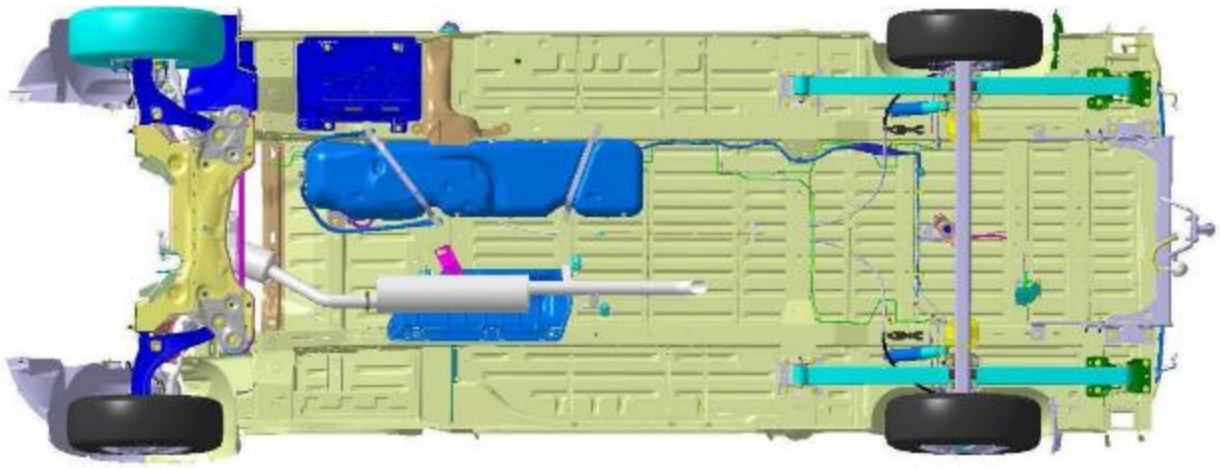
Depending on the tooling used for tightening the connection clamp, apply the following procedure:

- with an automatic screw driving machine (plant type and not impact type tooling) tighten to 21Nm
- during manual tightening, it must be carried out as linear as possible, without sudden pickup. Tightening stops when the X clearance between the clamp ends is between 3.6mm and 6.3mm (which correspond to a torque of approximately 18Nm).

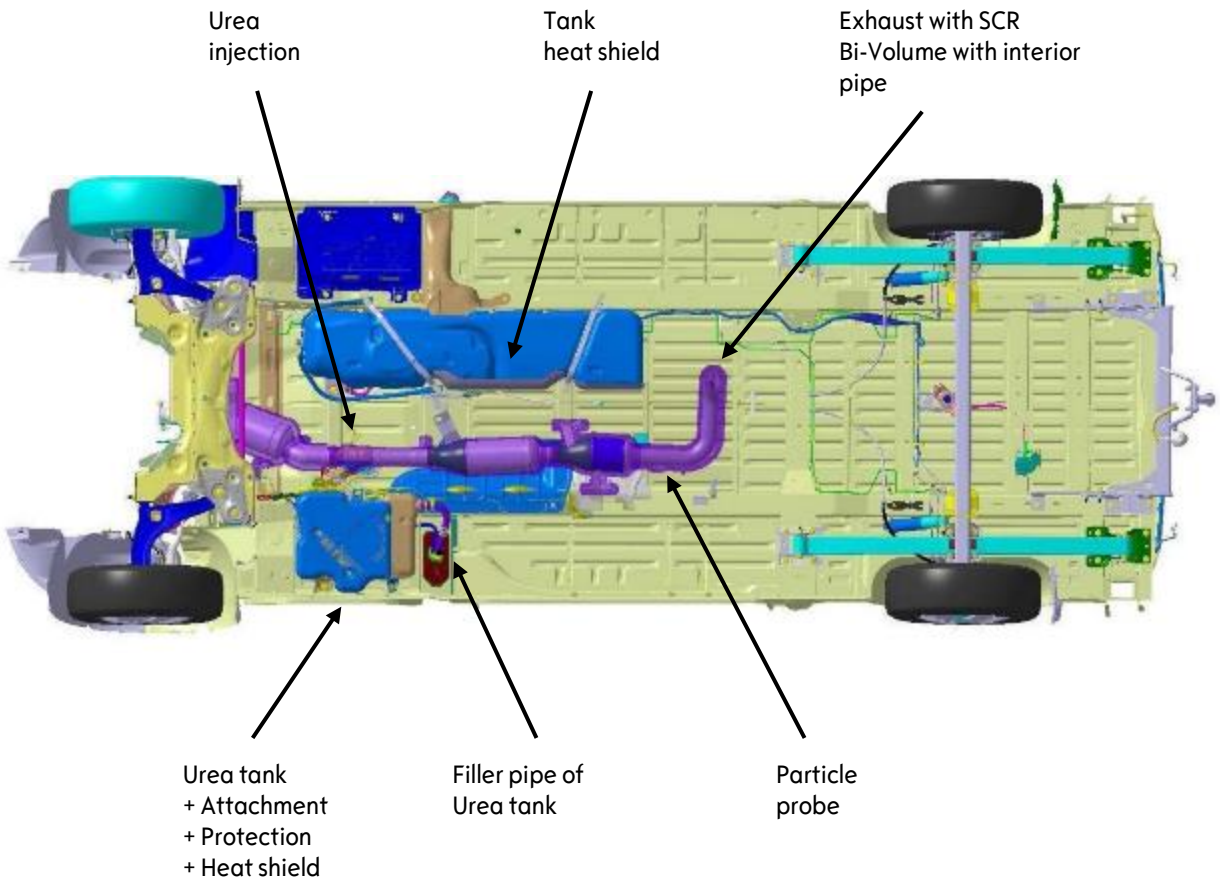


Location of exhaust system under vehicle depending on model

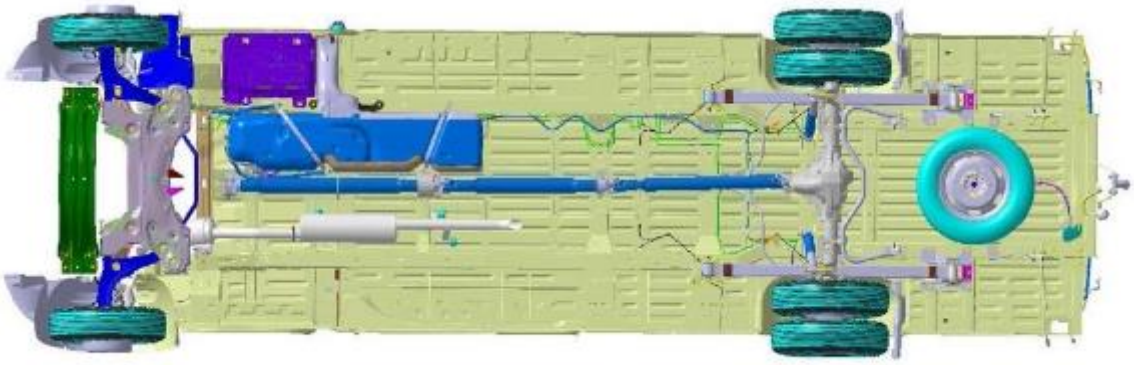
Front wheel drive, Euro 5 (without SCR)



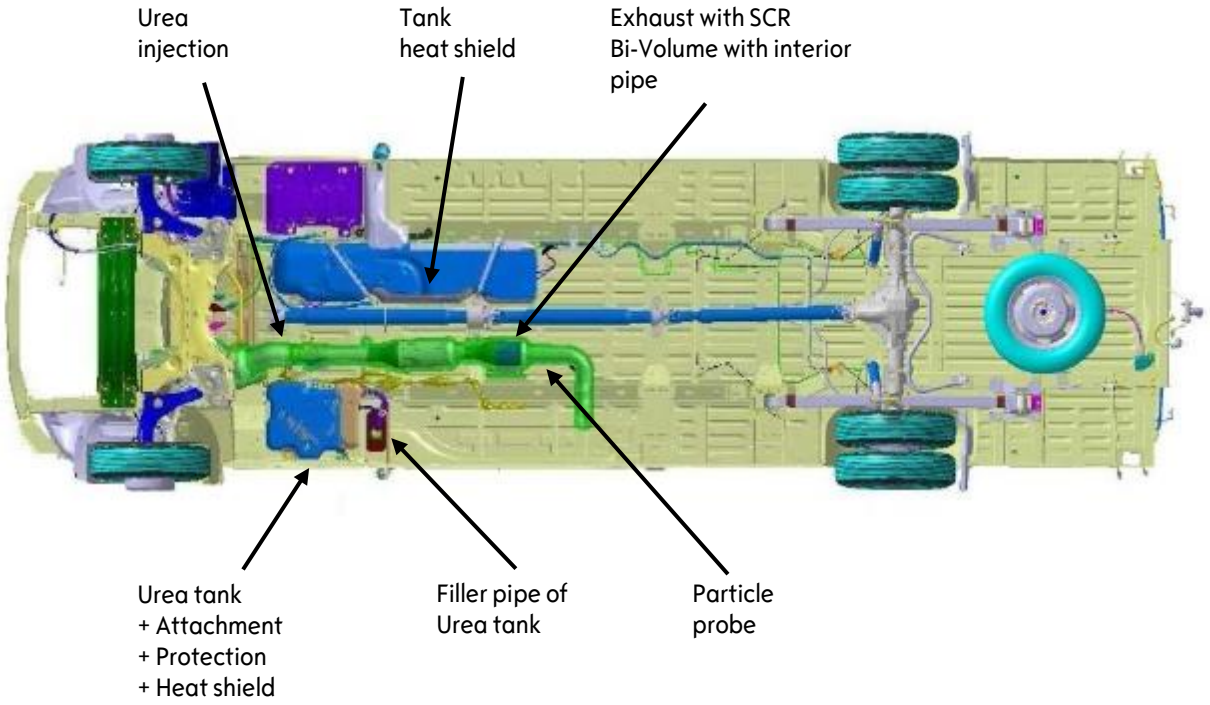
Front wheel drive, Euro 6 and SCR (Urea tank)



Rear wheel drive, Euro 5 (without SCR)



Rear wheel drive, Euro 6 and SCR (Urea tank)



Attention:

On FRONT AND REAR WHEEL DRIVE EURO 6 versions, the position of the Downstream NOX sensor PROHIBITS SHORTENING OF THE EXHAUST TUBE between the sensor and the tube, to prevent any water from rising on the sensor.

1.12 SEATS/ SEATBELTS/ AUDIBLE SEATBELT WARNING/ DEACTIVATION OF THE PRE-TENSIONERS

1.12.1 SEATS

The front seats vary depending on the equipment level, the options and the country of sale.

The driver's seat is tilt and height-adjustable and has longitudinal adjustment. As an option, it may have an armrest, heating, lumbar adjustment, a side airbag, etc.

A sprung driver's seat is available as an option.

The specific campervan versions are fitted with a swivelling driver's seat.

Passengers can have a single seat similar to the driver's seat or a 2-seater bench seat.

The 2-seater bench seat can have a swivelling table, a storage compartment, etc.

The chassis double cab versions are fitted with a rear 4-seater bench seat.

Seat versions

The driver's seat is tilt and height-adjustable and has longitudinal adjustment. As an option, it may have an armrest, heating, lumbar adjustment, a side airbag, etc. A suspension driver's seat is available as an option.

Pos.	Description
A	Standard seat
B	Swivelling seat

Passengers can have a single seat similar to the driver's seat or a 2-seater bench seat.

A

B

Pos.	Description
A	Single seat
B	2 seater bench seat

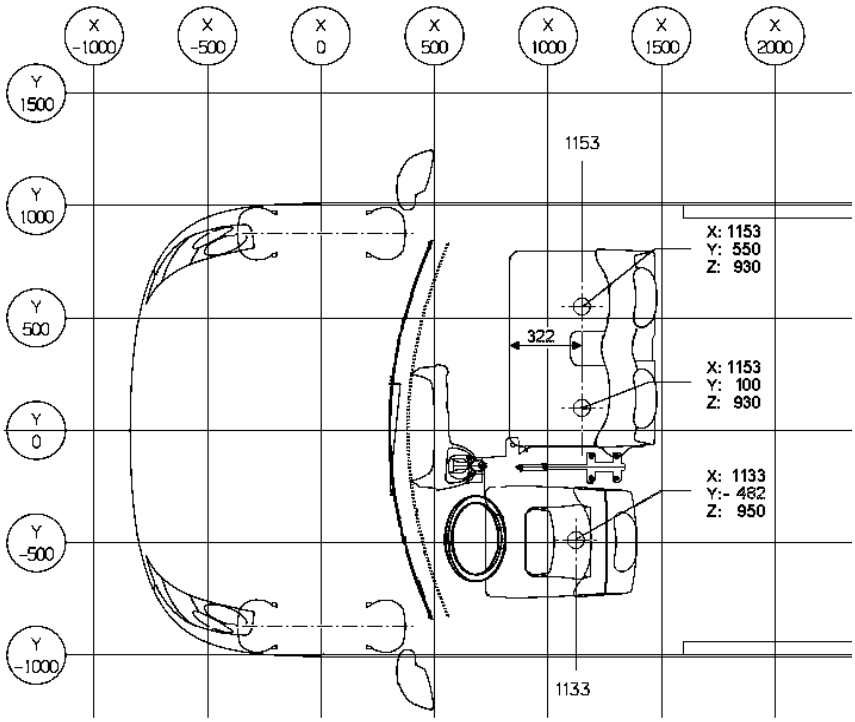
The **2-seater bench** seat can have a **swivelling table**, a storage compartment, etc.

The chassis double cab versions are fitted with a rear 4-seater bench seat.

Location of R points of driver and passenger

	a (°)	X	Y	Z
Single seat	20	1,133	± 482	950
Centre bench seat	19 or 17,5	1,153	± 100	930
Side bench seat	19	1,153	± 550	930

For the single seat, the R point is given for a position -30mm from the fully back position (total longitudinal travel of 210mm) and at mid-height (total vertical travel of 60mm).



Remove and install seats

On conversion, it may be necessary to remove the seats.

Attention:

Seat anchorages are component elements for vehicle type approval and must not therefore be modified.

In particular, it is forbidden to:

- modify the original anchorage point positions,
- insert other elements into the original assembly.

Any modification will require a new type approval.

On reassembly, tightening torques must be respected (use of a calibrated torque wrench is recommended).

- Attachment of the seat (T.-Nr. 93858958) or the 2-seater bench seat to the floor using M10x1.50-40 10.9 bolts (Part-No. 93197617), tightened to a torque of 44Nm ± 15%.
- Attachment of the chassis double cab 4-seater bench seat to the floor using M12x1.75-55 10.9 bolts (Part-No. 93192370), tightened to a torque of 62Nm ± 15%.
- Attachment of seat runners to the driver's seat podium using M8x1.25-20 bolts, tightened to a torque of 19,5 Nm ± 10%.

Attention:

On conversion, it may be necessary to remove the seats. Seat anchorages are component elements for vehicle type approval and must not therefore be modified. In particular, it is forbidden to modify the original anchorage point positions or insert other elements into the original assembly. Any modification will require a new type approval.

It is prohibited to use the bolts again once they have been removed. The bolts must be replaced with new bolts.

The front and rear brackets of seats in rows 2 and 3 may be removed, but it is prohibited to dismantle the components of these seats.

Note:

Removal and reinstallation or replacement of seats:

- Disassembly and reassembly must be carried out with the battery disconnected.
- For seats with the optional side airbag, direct contact between the connectors and the conductive parts must be avoided due to static electricity.
- Before carrying out any work on the airbags, the airbag ECU must be locked using the "Clip" diagnostic tool to disable the trigger lines (the airbag dashboard light is on continuously when contact is made).
- For regulatory reasons, it is not possible to replace a passenger seat with a two-seater bench or vice versa, without re-applying for approval of the new arrangement.
- On reassembly, tightening torques must be respected (use of a calibrated torque wrench is recommended).

1.12.2 SEATBELTS

Seat belts and their anchorages are component elements for vehicle type approval and must not therefore be modified.

Attention:

No changes to the seat belt are permitted, otherwise the type approval expires. Any modification will require a new type approval.

In particular, it is forbidden to:

- modify the original anchorage point positions,
- change the original fastening support,
- insert other elements into the original assembly,
- to remove the belt tensioner on a seat.

On conversion, it may be necessary to remove the seat belts.

On reassembly, tightening torques must be respected (use of a calibrated torque wrench is recommended) and the following should be checked:

- the correct positioning of the reel indexing before bolting,
- that the strap is not twisted between the reel and the final anchoring point,
- that no foreign body can come into contact with the strap,
- that the strap is not altered by the vehicle conversion.

If a floor or floor covering is added, it is essential to make a large enough cut-out so it does not interfere with the seat belt assembly.

	Fastening	Tightening torque	Observations
Reel	Bolt M10x150-33 10.9	21Nm ±15%	- Same for rows 1 and 2 - Use of a new bolt on reassembly
Fitting	Bolt M10x150-33 10.9	21Nm ±15%	- Same for rows 1 and 2 - Use of a bolt on reassembly
Angular member	Nut M9 for Row 1 Bolt M10 for Row 2	21Nm ±15%	- Special nut and bolt installed with belt
Front stalk	Special bolt	27Nm ±15%	- Attached to front seat and bench seat
Rear stalk	Bolt M12x175-48 10.9	62Nm ±15%	- Attached to floor - Use of a new bolt on reassembly

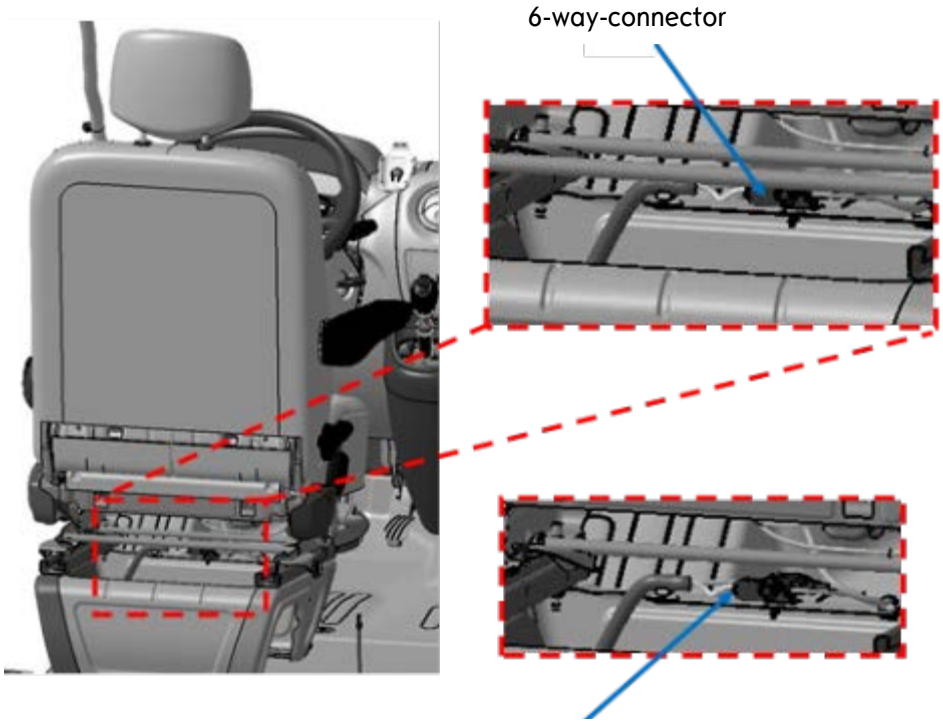
1.12.3 DRIVER'S SEATBELT WARNING

The vehicle comes with an audible seat belt warning as standard for the driver's seat.

If the driver's seat is changed, this feature can be replaced or potentially neutralized.

The seat belt stalk has a mechanical contact switch that reads the presence of the seat belt buckle. This contact switch is directly connected to the airbag ECU.

The contact connections are on the 6-way connector under the seat.



Way number	Allocation
Way 1 (60DU)	Seatbelt buckle connection (wire cross section 0.5mm²)
Way 2 (60DV)	Seatbelt buckle connection (wire cross section 0.5mm²)
Way 3 (SP8)	Protected +12V circuit distribution supply for heated seat (wire cross section 1mm²)
Way 4 (SP8)	Protected +12V circuit distribution supply for heated seat (wire cross section 2mm²)
Way 5 (MAN)	Ground (wire cross section 0.5mm²)
Way 6 (LPG)	Protected left-hand side light supply (wire cross section 0.75mm²)

To activate the audible seat belt warning, a stalk fitted with an opening contact switch should be used, which should be connected to the connector using ways 1 and 2 of the 6-way connector.

The presence of the seat belt is detected when the contact switch is open.

To deactivate the audible seat belt warning, ways 1 and 2 of the 6-way connector need to be connected by a shunt.

Note:

In cases where the audible seat belt warning is deactivated, it is advisable to inform the end customer, for example through the instruction manual and/or with a sticker clearly visible on the dashboard.

1.12.4 DEACTIVATION OF THE PRE-TENSIONERS

Depending on the customer's requirements, an airbag or seat belt pre-tensioner may need to be deactivated. This can be done using the diagnostics tool in the Opel/ Vauxhall network.

After modification, the vehicle must still comply with the legislation and standards in force in the country of sale.

The customer must be notified of any modifications.

Note:

An airbag or pre-tensioner that has been deactivated can be reactivated at any time. However, airbags and pre-tensioners cannot be added after vehicle manufacture.

1.13 DOOR MIRRORS

Chassis cabs and platform cabs come with door mirrors as standard, they apply up to a vehicle width of 2170mm.

"Long arm" door mirrors can be ordered on option, they apply up to a vehicle width of 2,170mm to 2,350mm.

The mirrors have a built-in side indicator. There are two types of indicator: 5W or 16W, depending on the length of the vehicle.

Note:

All vehicles complying with Euro 6 and Euro VI (fitted with adblue type emission control system) are fitted with external temperature sensor in the rearview door mirror.

The outside temperature information (sensor in the right mirror) is taken into account by the control unit which manages the injection of urea for the emission control.

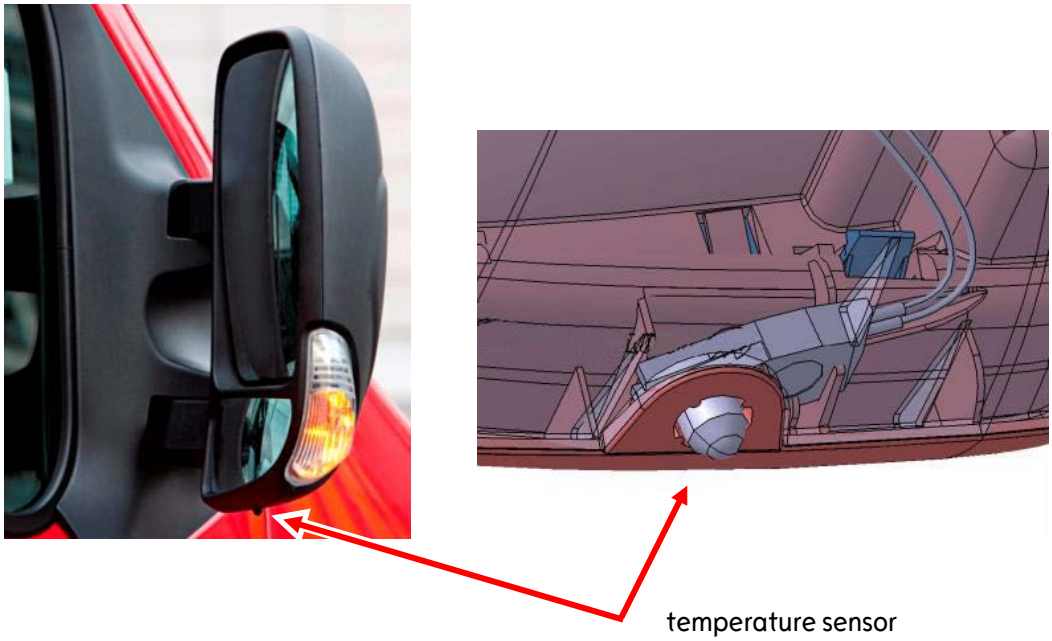
To change the indicator power supply, see chapter 4.11.

For maximum body dimension, see chapter 2.1.2.

Attention:

In vehicles that meet the Euro 6 standard or Euro VI it is prohibited to remove, to disconnect or replace the temperature sensor in the side mirror with an incompatible sensor. The vehicle would then no longer meet the emission standard.

Installation position of the temperature sensor



1.13.1 STANDARD DOOR MIRRORS

(Permissible overall width from 2,020mm to 2,170mm, without mirrors. The width inclusive mirrors is 2470mm).

Type	Side	Steering
Manual without defrosting	Right	Steering right
		Steering left
	Left	Steering right
		Steering left
Manual with defrosting	Right (S)	Steering right
		Steering left
	Left	Steering right
		Steering left

(S): with temperature sensor

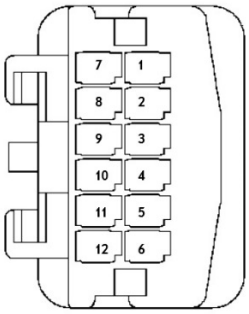
1.13.2 "LONG ARM" DOOR MIRRORS

(Permissible overall width from 2,170mm to 2,350mm, without mirrors. The width inclusive mirrors is 2654mm).

Type	Side	Steering
Electric with defrosting	Right	Steering left
	Left	
	Right (S)	Steering right
	Left	

(S): with temperature sensor

1.13.3 ELECTRIC DOOR MIRROR WIRING



LEFT-HAND FRONT door connector

Number	Description	Wiring colour
1	Indicator terminal (+)	
2	Indicator terminal (-)	
3	Not used	
4	Not used	
5	Not used	
6	De-icer earth (-)	Brown
7	De-icer (+)	Brown
8	L/R direction motor terminal	Green
9	Shared motor terminal	Red
10	Sky/Ground direction motor terminal	Blue
11	Not used	
12	Not used	

RIGHT-HAND FRONT door connector

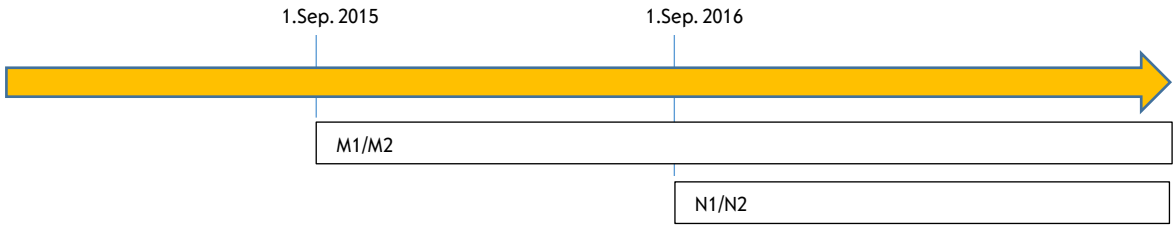
Number	Description	Wiring colour
1	Indicator terminal (+)	
2	Indicator terminal (-)	
3	Not used	
4	Temperature sensor earth	Black
5	Temperature sensor	Black
6	De-icer earth (-)	Brown
7	De-icer (+)	Brown
8	L/R direction motor terminal	Green
9	Shared motor terminal	Red
10	Sky/Ground direction motor terminal	Blue
11	Not used	
12	Not used	

1.14 ADBLUE (UREA)

The SCR-technology (SCR = Selective catalytic reduction) was developed to reduce NOx-emissions. Therefore a reductive is necessary (aqueous urea e.g. AdBlue). It is carried in a separate tank. As a function of charging state it is injected into the exhaust system.

See the following time schedule for the regulatory application of euro norms (5; 6b; VI b):

Before 1. September 2015	Definition Euro 5 (without AdBlue).
1. of september 2015:	AdBlue (EURO 6b) for versions with M1 and front wheel drive.
1. of september 2015:	AdBlue (EURO VI b) for versions with M1, front and rear wheel drive.
1. of september 2016:	AdBlue (EURO VI b) for versions with N1 or N2, front and rear wheel drive.
1. of september 2016:	AdBlue (EURO 6 b) for versions with N1 or N2 and front wheel drive.



1.14.1. GENERAL INFORMATION

This norm requires a NOx- curing. An aqueous dissolution is injected into the exhaust line. This leads to a selective catalytic reaction (SCR)

This includes the following technical modification:

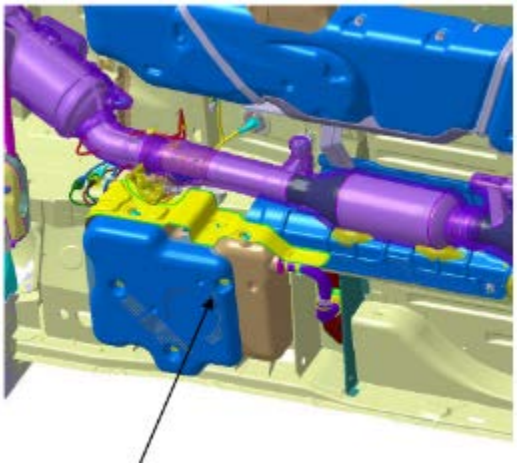
- The AdBlue filler pipe is located on the passenger's side (vis-à-vis fuel filler door)
- Additional urea tank (Capacity = 22.4 l), injection system and a suitable control module
- Exhaust pipe including a catalytic converter

The use of a catalyst additive enables the reduction of noxious substances. They are converted into steam and nitrogen.

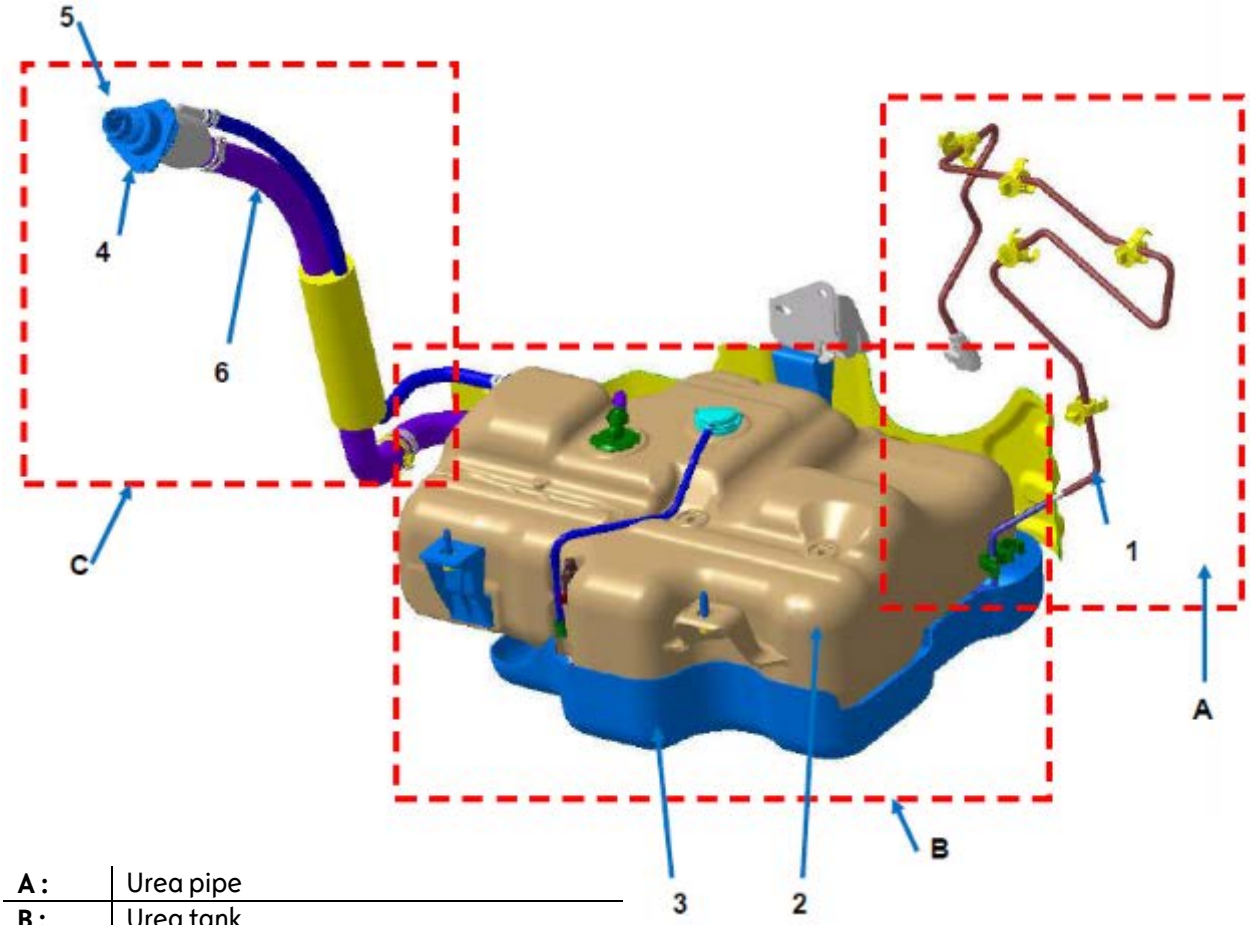
Note:

The SCR-system (urea tank, filler pipe and urea circuit including the gauge module) must not be modified. If modifications become necessary the permission expires. If the system must be modified, this will require the coach builder to apply for a new type approval.

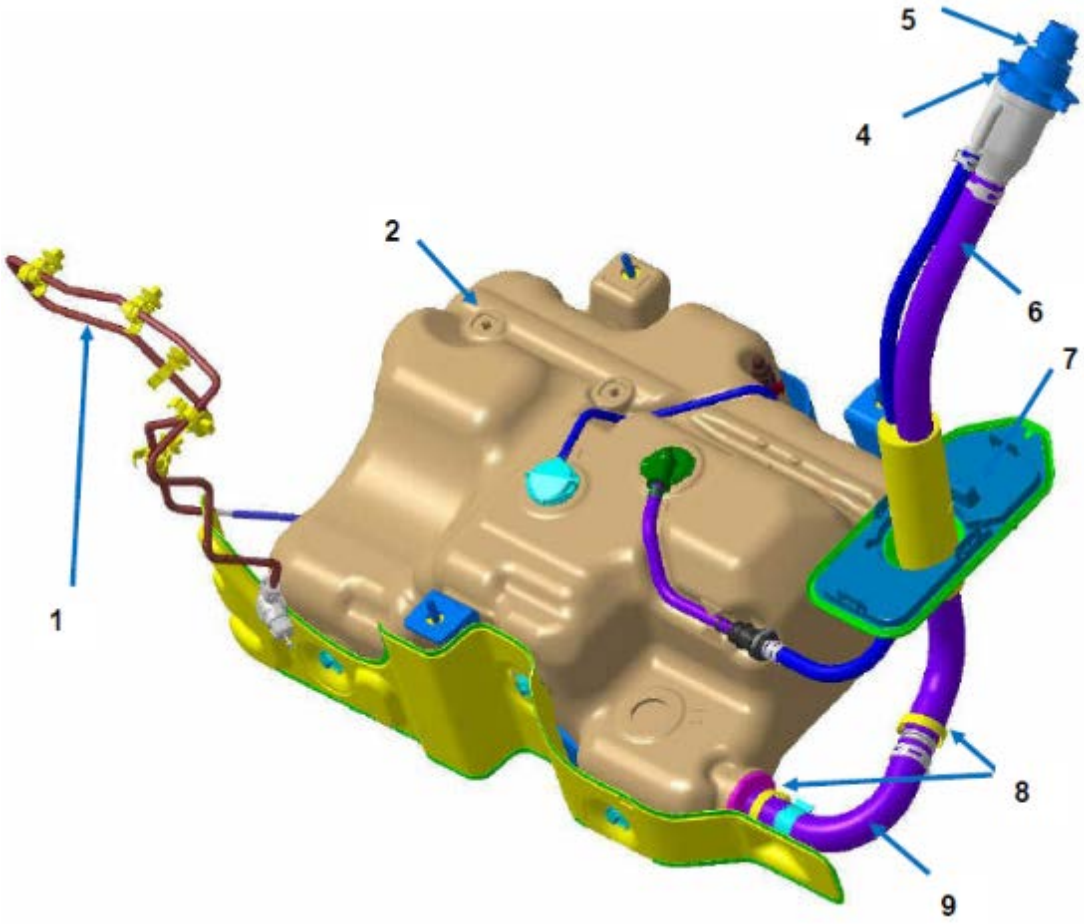
1.14.2. SCR-COMPONENTS



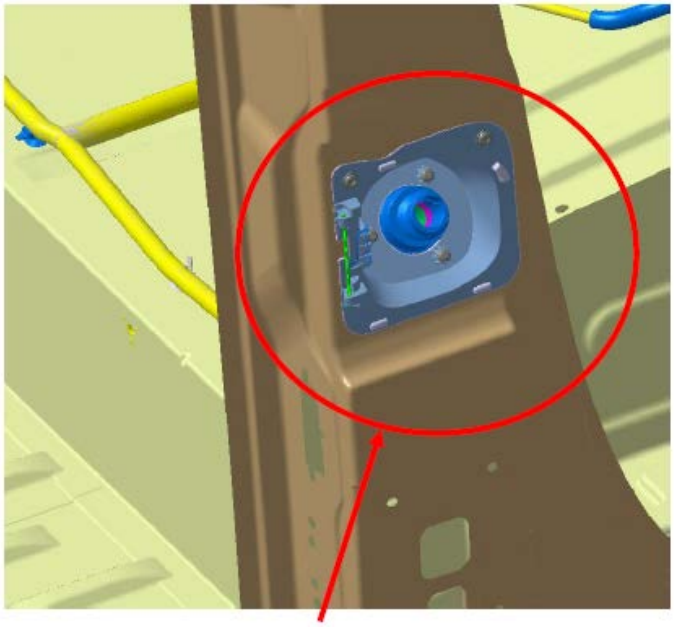
Urea tank (AdBlue), bottom view



A :	Urea pipe
B :	Urea tank
C :	Urea filler pipe
1 :	Urea tank exhaust pipe
2 :	Urea tank
3 :	Tank protection
4 :	Tank inlet
5 :	Cap (Ref. 204154862R)
6 :	Tank hose

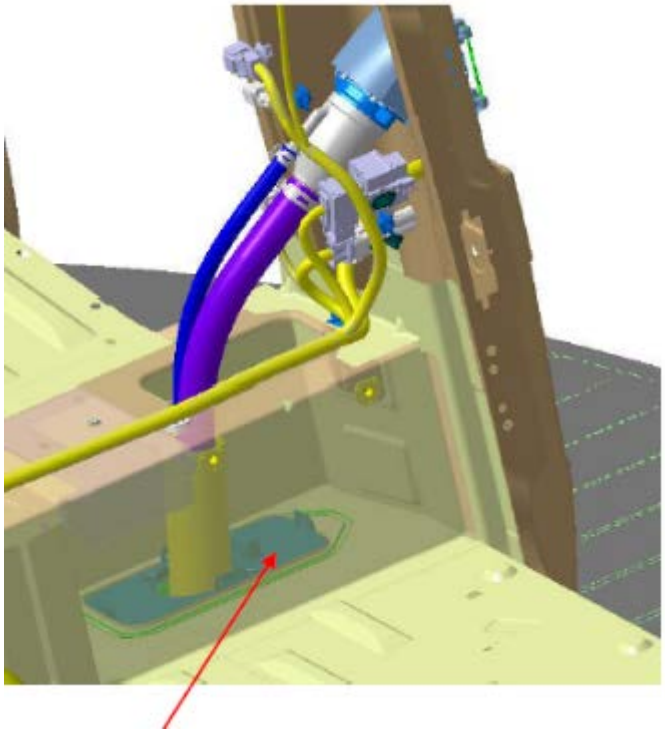


1	Urea tank exhaust pipe
2	Urea tank
3	Tank protection
4	Tank inlet
5	Cap (Ref. 204154862R)
6	Tank hose
7	Duct of filler pipe
8	Clamp 30-40 (x2)
9	Pipe-Urea tank



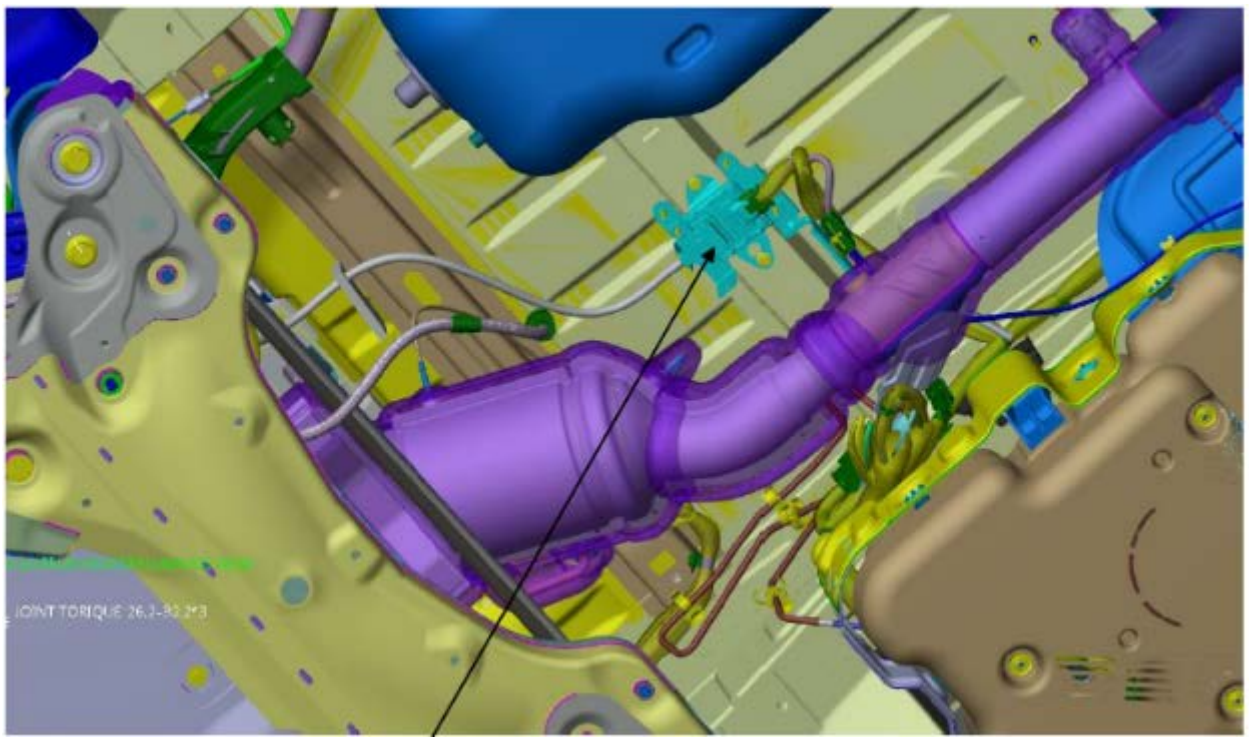
Location of tank inlet for AdBlue on right B-pillar

In case of modification in the area of the tank inlet make sure that filling with nozzle or bottle remains unrestrained.



Duct of filler pipe

SCR-Control module (Selective Catalytic Reduction)



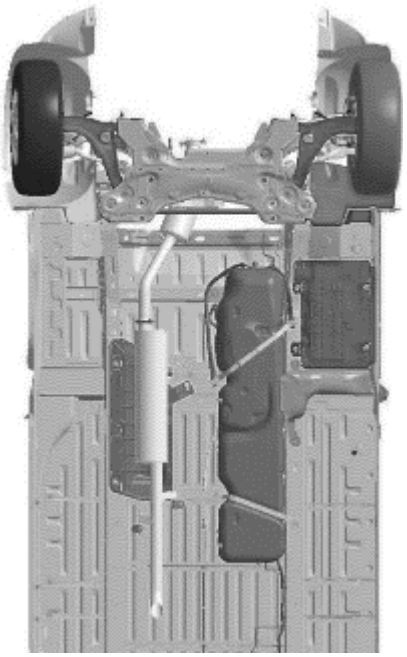
SCR-system control module

The software definition of the SCR control module depends on the position of the fuel tank and the pipelines (length and curve) of tank / injector nozzle.

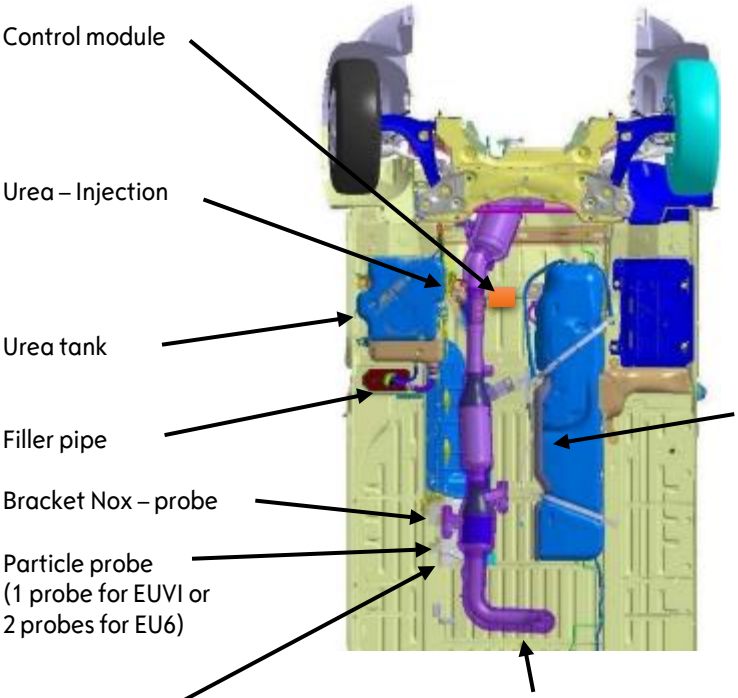
1.14.3. SCR-SYSTEMS: FRONT AND REAR WHEEL DRIVE

Movano, front wheel drive

EURO5

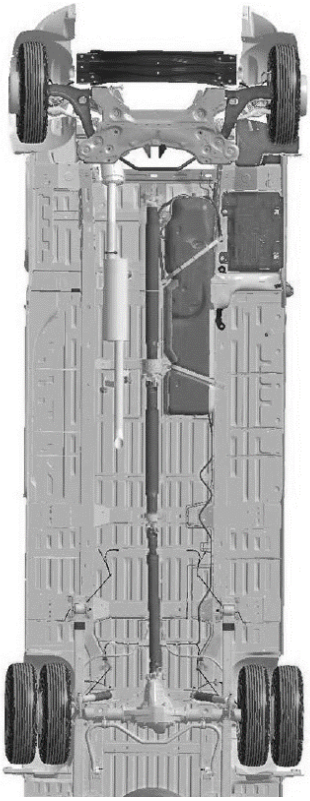


EURO6



Movano, rear wheel drive

EURO5



EURO6

Attention:

On FRONT AND REAR WHEEL DRIVE EURO 6 versions, the position of the Downstream NOX sensor PROHIBITS SHORTENING OF THE EXHAUST TUBE between the sensor and the tube, to prevent any water from rising on the sensor.

1.14.4. RECOMMENDATIONS

For each removal / installation of the SCR system the integrity must be guaranteed.

Note:

The SCR-System (Urea, filler pipe, injection) must not be modified. If modifications are necessary, the permission expires and must be requested by the coachbuilder.

After draining the urea tank for removal, it must be refilled after installation. Therefor it is required to reset the SCR system in the Opel/ Vauxhall network.

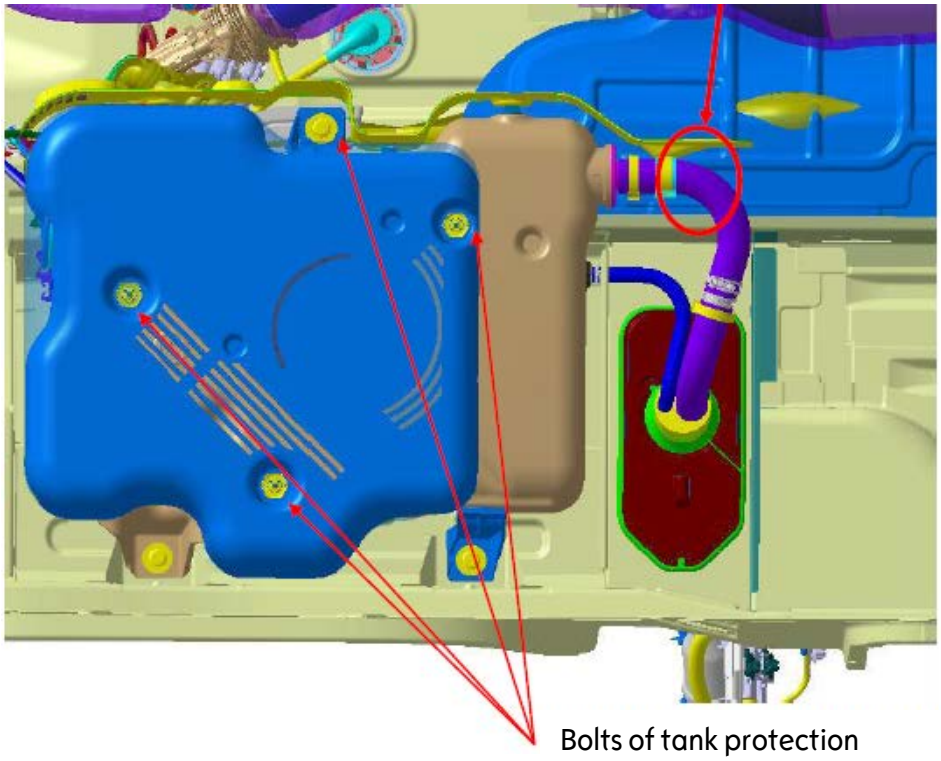
For removal and installation please act according to the installation order.

Removal:

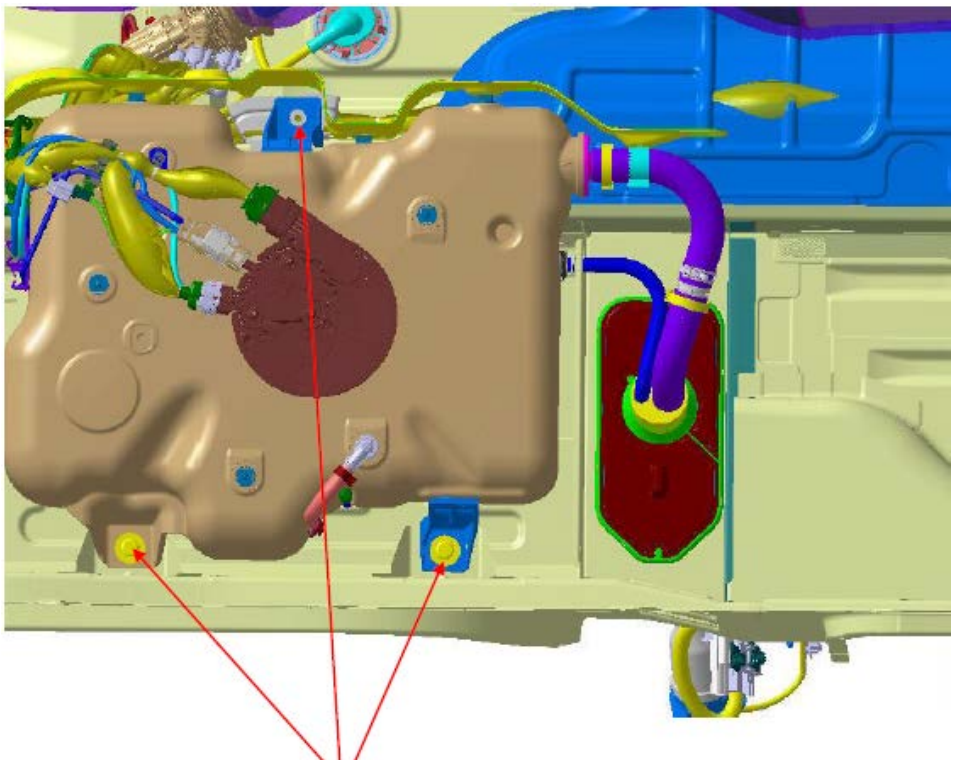
1. The attachments of the urea tank protection
2. The attachments of the urea tank

Pay attention to the filler pipe when removing or installing the urea tank.

Attachment on tank protection



Bolts of tank protection



Bolts of urea tank

Torque:

- Brackets of urea tank (21 Nm)
- Attachments of urea tank protection (2 Nm)

1.15 **WLTP (**Worldwide Harmonised Light-Duty Vehicles Test Procedure**)**

From September 2017 (1 year delay for Light Commercial Vehicles), certain new cars have already been type-approved according to the Worldwide Harmonized Light Vehicles Test Procedure (WLTP), a more realistic test procedure for measuring fuel consumption and CO_2 emissions.

As of 1 September 2018, the WLTP will gradually implement the new European Replace Driving Cycle (NEDC). Due to the change in testing parameters, the CO_2 and fuel consumption values obtained under WLTP may be higher than those obtained under NEDC testing. This may lead to corresponding changes in vehicle taxation from 1 September 2018.

As taxation is a national competence, consumers are invited to contact their national automobile associations for more details on how this will be handled in their country.

Attention:

In the case of a change in weight, rolling resistance and/or the front surface of the vehicle caused by vehicle conversion, the retrofitter/ converter must ensure that the vehicle-specific, permissible CO_2 emission values (type approval values) are complied with, particularly under consideration of the WLTP legislation.

No impact for M1 conversions until August 2019 (Phase 2) due to usage of Euro VI engine (heavy duty homologated → not WLTP relevant)

You can ask further questions about WLTP via our helpdesk.
Contact: wltp-conversion-helpdesk@opel.com

2 DIMENSIONS AND WEIGHTS

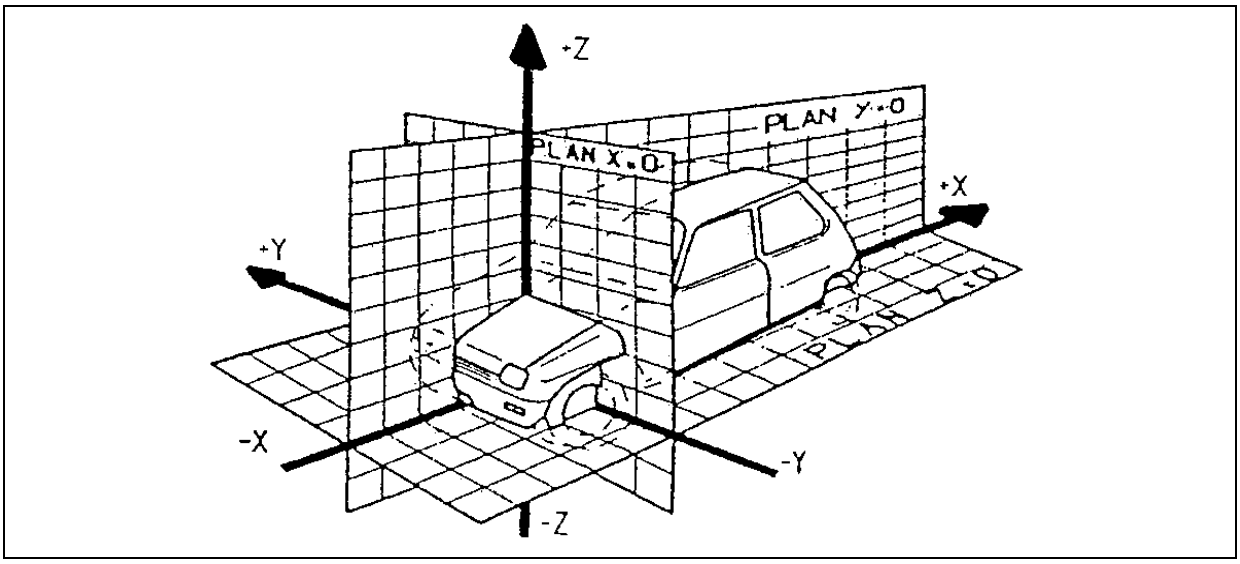
2.1 REFERENCE GUIDE/ MAIN VIEWS AND DIMENSIONS/ HEIGHT OF ROOF CAB/ EXTERIOR LIGHTNING – EUROPEAN REGULATIONS

2.1.1 REFERENCE GUIDE

In general, dimensions are expressed as absolute (dimension between two points) and positions as relative (location in the reference guide). The origin of the reference system is a point situated on the front axle, at the centre of the vehicle, as illustrated on the following view.

For laden vehicles, the front axle is fixed at +2mm along the X axis and +145.5mm along the Z axis in relation to the reference system of the unladen vehicle.

Reference guide

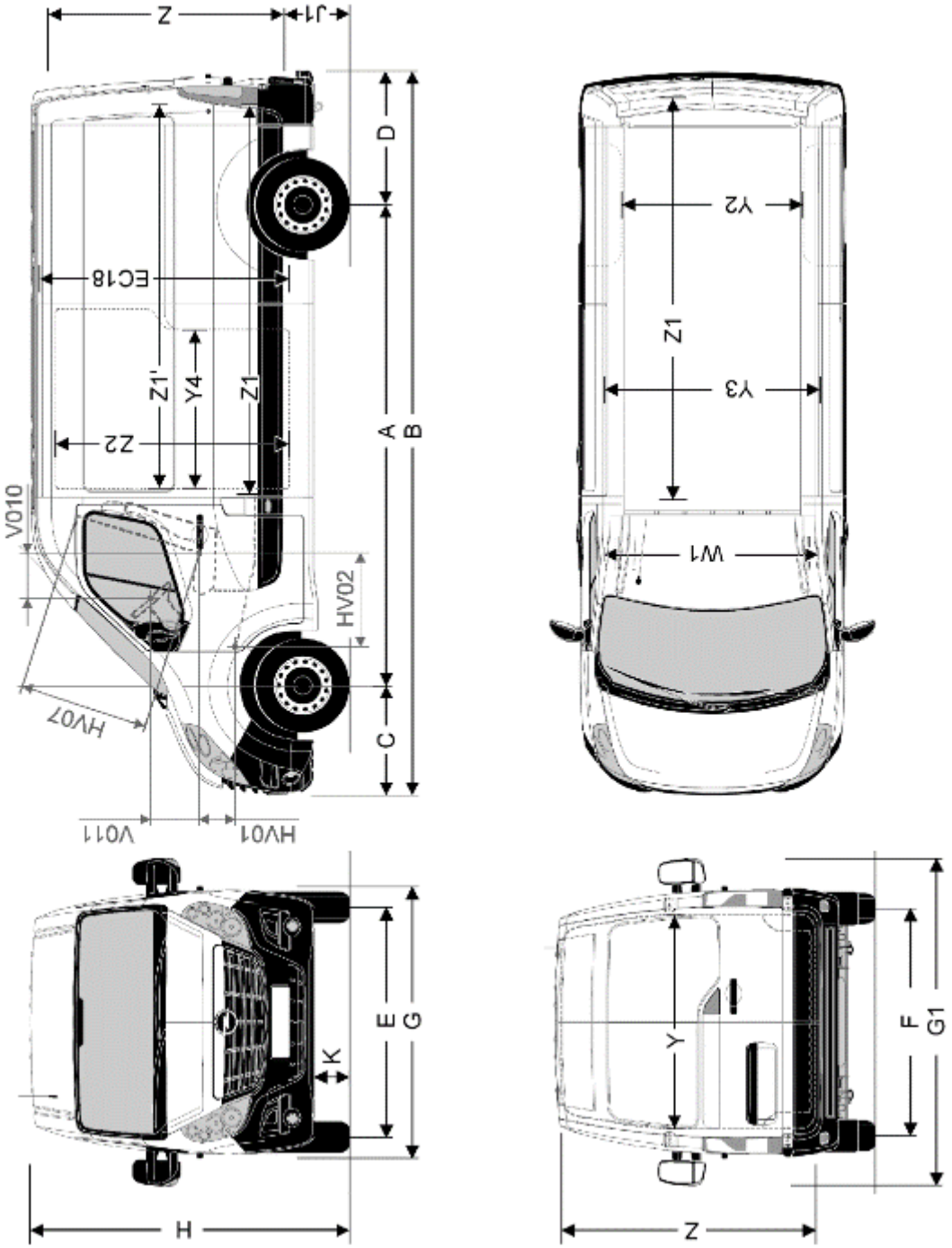


The figures below show the different versions of the Movano. The main dimensions are given in the tables.

2.1.2 DIMENSIONS

The figures below show the different versions of the Movano. The main dimensions are given in the tables.

– Panel van



		PANEL VAN					
Version		**L1**					
Drive		**Front wheel drive**					
Roof		**H1**			**H2**		
GVW		**2800 kg**	**3300 kg**	**3500 kg**	**2800 kg**	**3300 kg**	**3500 kg**
V	=Z1*Y3*EC18	**7,8 m³**	**7,8 m³**	**7,8 m³**	**8,6 m³**	**8,6 m³**	**8,6 m³**
A		3182	3182	3182	3182	3182	3182
B		5048	5048	5048	5048	5048	5048
C		842	842	842	842	842	842
D		1024	1024	1024	1024	1024	1024
E		1750	1750	1750	1750	1750	1750
F		1730	1730	1730	1730	1730	1730
G		2070	2070	2070	2070	2070	2070
G1		2470	2470	2470	2470	2470	2470
H	MVODM Min / Max GVW Min	2290 / 2303 2249	2290 / 2303 2226	2294 / 2307 2222	2481 / 2496 2443	2481 / 2496 2419	2485 / 2500 2415
H2	MVODM / GVW	Min : 2299 / 2251 Max 2317/ 2264	Min : 2300 / 2222 Max:2317/ 2235	Min: 2303/ 2213 Max: 2320/ 2227	Min: 2515 / 2468 Max: 2533/ 2481	Min: 2515/ 2439 Max: 2533/ 2452	Min: 2518/ 2431 Max: 2536/ 2444
J1	MVODM	Min : 546 Max : 560	Min : 546 Max : 560	Min : 550 Max : 564	Min : 544 Max : 559	Min : 544 Max : 559	Min : 547 Max : 563
K	GVW	Min : 189 Max : 196	Min : 182 Max : 190	Min : 186 Max : 194	Min : 188 Max : 196	Min : 182 Max : 189	Min : 186 Max : 194
HV02		742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)
W1		1749	1749	1749	1749	1749	1749
HV07		1017	1017	1017	1017	1017	1017
EC18		1700	1700	1700	1894	1894	1894
VO10		365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)
VO11		342	342	342	342	342	342
HV01		410	410	410	410	410	410
Y		1577	1577	1577	1577	1577	1577
Y1		1580	1580	1580	1580	1580	1580
Y2		1380	1380	1380	1380	1380	1380
Y3		1765	1765	1765	1765	1765	1765
Y4		1050	1050	1050	1050	1050	1050
Z		1627	1627	1627	1820	1820	1820
Z1		2583	2583	2583	2583	2583	2583
Z1'		2530	2530	2530	2530	2530	2530
Z2		1581	1581	1581	1780	1780	1780

All dimensions are in millimetres unless otherwise specified.

		PANEL VAN					
Version		L2				L3	
Drive		Front wheel drive				Front wheel drive	
Roof		H2		H3		H2	H3
GVW		3300 kg	3500 kg	3300 kg	3500 kg	3500 kg	3500 kg
V	=Z1*Y3*EC18	10,3 m³	10,3 m³	11,7 m³	11,7 m³	12,5 m³	14,1 m³
A		3682	3682	3682	3682	4332	4332
B		5548	5548	5548	5548	6198	6198
C		842	842	842	842	842	842
D		1024	1024	1024	1024	1024	1024
E		1750	1750	1750	1750	1750	1750
F		1730	1730	1730	1730	1730	1730
G		2070	2070	2070	2070	2070	2070
G1		2470	2470	2470	2470	2470	2470
H	MVODM Min / Max GVW Min	2482 / 2495 2428	2486 / 2499 2424	2732 / 2745 2676	2736 / 2749 2674	2475 / 2488 2418	2731 / 2744 2669
H2	MVODM / GVW	Min: 2514/ 2450 Max: 2530/ 2461	Min: 2517/ 2444 Max:2533/ 2455	Min: 2513/ 2450 Max: 2529/ 2462	Min: 2516/ 2444 Max: 2532/ 2455	Min: 2511/ 2451 Max: 2526/ 2462	Min: 2511/ 2451 Max: 2524/ 2464
J1	MVODM	Min : 545 Max : 558	Min : 548 Max : 562	Min : 543 Max : 556	Min : 547 Max : 560	Min : 543 Max : 557	Min : 542 Max : 555
K	GVW	Min : 174 Max : 181	Min : 178 Max : 185	Min : 173 Max : 181	Min : 178 Max : 185	Min : 172 Max : 181	Min : 169 Max : 179
HV02		742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)
W1		1749	1749	1749	1749	1749	1749
HV07		1017	1017	1017	1017	1017	1017
EC18		1894	1894	2144	2144	1894	2144
VO10		365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)
VO11		342	342	342	342	342	342
HV01		410	410	410	410	410	410
Y		1577	1577	1577	1577	1577	1577
Y1		1580	1580	1580	1580	1580	1580
Y2		1380	1380	1380	1380	1380	1380
Y3		1765	1765	1765	1765	1765	1765
Y4		1270	1270	1270	1270	1270	1270
Z		1820	1820	1820	1820	1820	1820
Z1		3083	3083	3083	3083	3733	3733
Z1'		3030	3030	3030	3030	3680	3680
Z2		1780	1780	1780	1780	1780	1780

All dimensions are in millimetres unless otherwise specified.

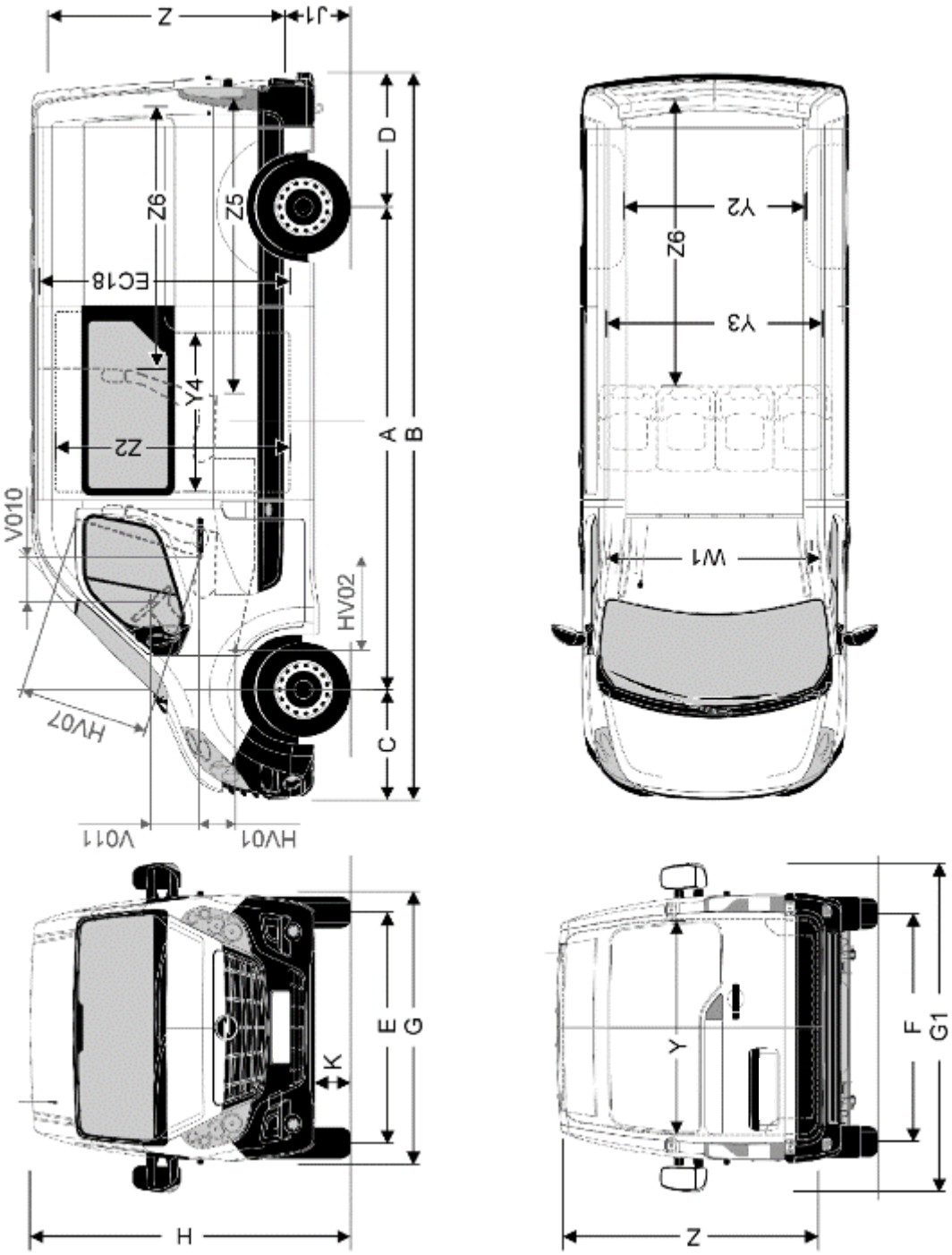
		PANEL VAN			
Version		**L3**		**L3**	
Drive		**Rear wheel drive** (single wheels)		**Rear wheel drive** (twin wheels)	
Roof		**H2**	**H3**	**H2**	**H3**
GVW		**3500 kg**	**3500 kg**	**3500/4500kg**	**3500/4500kg**
V	=Z1*Y3*EC18	**11,8 m³**	**13,5 m³**	**11,8 m³**	**13,5 m³**
A		3682	3682	3682	3682
B		6198	6198	6198	6198
C		842	842	842	842
D		1674	1674	1674	1674
E		1750	1750	1750	1750
F		1730	1730	1612	1612
G		2070	2070	2070	2070
G1		2470	2470	2470	2470
H	MVODM Min / Max zGG Min	2507 / 2527 2452	2764 / 2786 2703	2533 / 2549 2438	2797 / 2815 2690
H2	MVODM / zGG	Min: 2549/ 2490 Max:2574/ 2506	Min : 2547/ 2490 Max: 2572/ 2506	Min : 2590/ 2475 Max: 2611/ 2490	Min : 2588 / 2476 Max: 2609/ 2490
J1	MVODM	Min : 674 Max : 696	Min : 672 Max : 694	Min : 706 Max : 724	Min : 704 Max : 723
K	zGG	Min : 197 Max : 208	Min : 197 Max : 208	Min : 181 Max : 191	Min : 181 Max : 191
HV02		742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)
W1		1749	1749	1749	1749
HV07		1017	1017	1017	1017
EC18		1798	2048	1798	2048
VO10		365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)
VO11		342	342	342	342
HV01		410	410	410	410
Y		1577	1577	1577	1577
Y1		1580	1580	1580	1580
Y2		1380	1380	1080	1080
Y3		1765	1765	1765	1765
Y4		1270	1270	1270	1270
Z		1724	1724	1724	1724
Z1		3733	3733	3733	3733
Z1'		3680	3680	3680	3680
Z2		1684	1684	1684	1684

All dimensions are in millimetres unless otherwise specified.

		PANEL VAN			
Version		**L4**		**L4**	
Drive		**Rear wheel drive** (single wheels)		**Rear wheel drive** (twin wheels)	
Roof		**H2**	**H3**	**H2**	**H3**
GVW		**3500kg**	**3500kg**	**3500/4500kg**	**3500/4500kg**
V	=Z1*Y3*EC18	**13,9 m³**	**15,8 m³**	**13,9 m³**	**15,8 m³**
A		4332	4332	4332	4332
B		6848	6848	6848	6848
C		842	842	842	842
D		1674	1674	1674	1674
E		1750	1750	1750	1750
F		1612	1612	1612	1612
G		2070	2070	2070	2070
G1		2470	2470	2470	2470
H	MVODM Min / Max zGG Min	2515 / 2535 2463	2772 / 2794 2714	2541 / 2557 2449	2792 / 2808 2699
H2	MVODM / zGG	Min : 2557/ 2501 Max: 2581/ 2517	Min : 2555/ 2501 Max: 2580/ 2517	Min : 2583/ 2487 Max: 2600/ 2502	Min: 2582/ 2487 Max: 2599/ 2502
J1	MVODM	Min : 682 Max : 704	Min : 680 Max : 702	Min : 701 Max : 717	Min : 700 Max : 715
K	zGG	Min : 197 Max : 208	Min : 197 Max : 208	Min : 167 Max : 178	Min : 167 Max : 178
HV02		742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)
W1		1749	1749	1749	1749
HV07		1017	1017	1017	1017
EC18		1798	2048	1798	2048
VO10		365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)
VO11		342	342	342	342
HV01		410	410	410	410
Y		1577	1577	1577	1577
Y1		1580	1580	1580	1580
Y2		1380	1380	1080	1080
Y3		1765	1765	1765	1765
Y4		1270	1270	1270	1270
Z		1724	1724	1724	1724
Z1		4383	4383	4383	4383
Z1'		4330	4330	4330	4330
Z2		1684	1684	1684	1684

All dimensions are in millimetres unless otherwise specified.

– Crew van


Z
J1
D
Z6
Z5
EC18
Y4
Z2
A
B
V010
HV02
HV07
C
V011
HV01
Y2
Z6
Y3
W1
E
G
K
H
Y
F
G1
Z

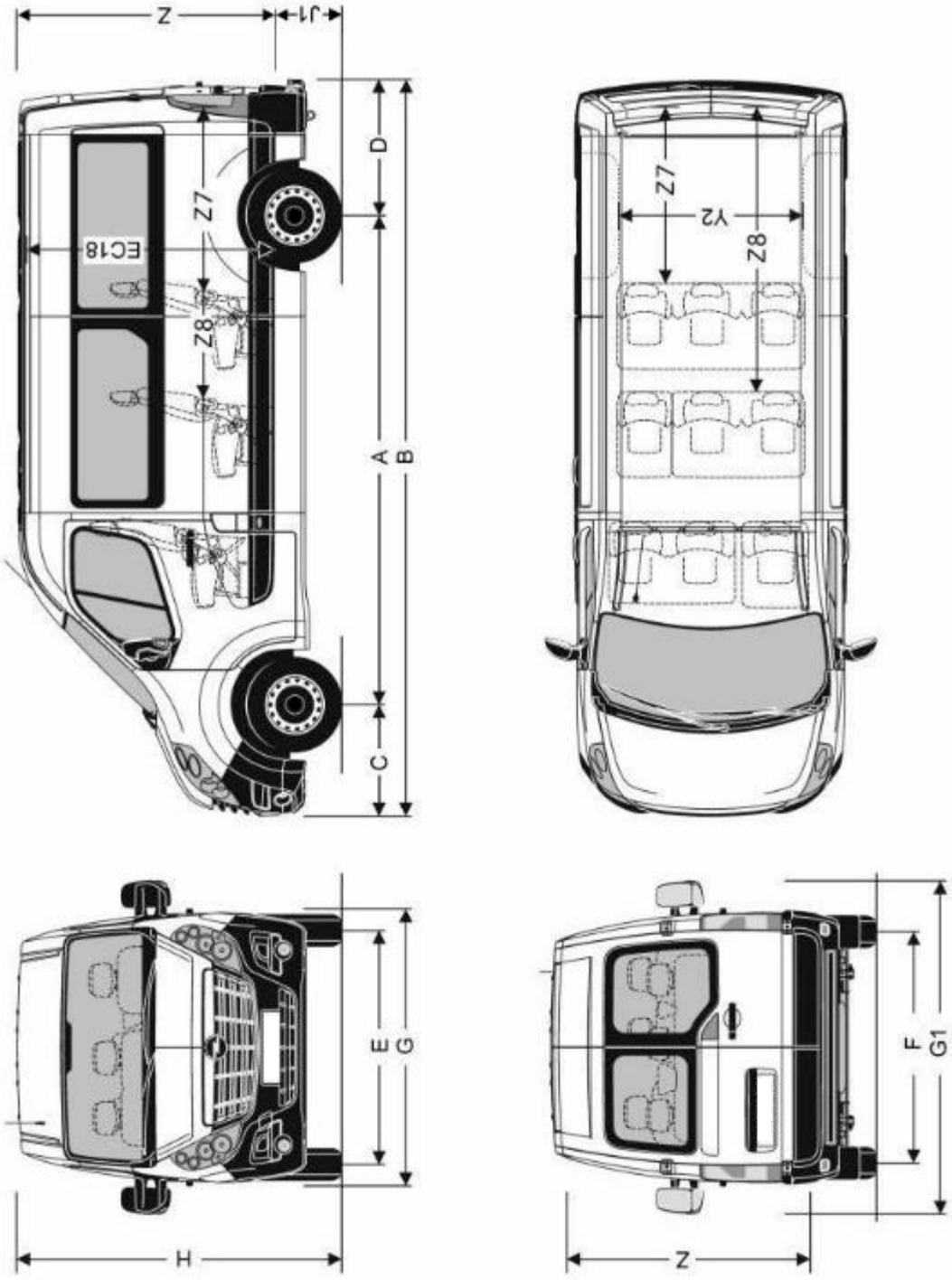
		CREW VAN					
Version		**L1**				**L2**	
Drive		**Front wheel drive**				**Front wheel drive**	
Roof		**H1**		**H2**		**H2**	
GVW		**3300 kg**	**3500 kg**	**3300 kg**	**3500 kg**	**3300 kg**	**3500 kg**
V	=Z6*Y3*EC18	**4,6 m³**	**4,6 m³**	**6,7 m³**	**6,7 m³**	**8,8 m³**	**8,8 m³**
A		3182	3182	3182	3182	3682	3682
B		5048	5048	5048	5048	5548	5548
C		842	842	842	842	842	842
D		1024	1024	1024	1024	1024	1024
E		1750	1750	1750	1750	1750	1750
F		1730	1730	1730	1730	1730	1730
G		2070	2070	2070	2070	2070	2070
G1		2470	2470	2470	2470	2470	2470
H	MVODM Min / Max GVW Min	2290 / 2303 2226	2294 / 2307 2222	2481 / 2496 2419	2485 / 2500 2415	2482 / 2495 2428	2486 / 2499 2424
H2	MVODM / GVW	Min : 2300/ 2222 Max:2317/ 2235	Min: 2303/ 2213 Max: 2320/ 2227	Min: 2515/ 2439 Max: 2533/ 2452	Min: 2518/ 2431 Max: 2536/ 2444	Min: 2514/ 2450 Max: 2530/ 2461	Min: 2517/ 2444 Max:2533/ 2455
J1	MVODM	Min : 546 Max : 560	Min : 550 Max : 564	Min : 544 Max : 559	Min : 547 Max : 563	Min : 545 Max : 558	Min : 548 Max : 562
K	GVW	Min : 182 Max : 190	Min : 186 Max : 194	Min : 182 Max : 189	Min : 186 Max : 194	Min : 174 Max : 181	Min : 178 Max : 185
HV02		742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)
W1		1749	1749	1749	1749	1749	1749
HV07		1017	1017	1017	1017	1017	1017
EC18		1700	1700	1894	1894	1894	1894
VO10		365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)
VO11		342	342	342	342	342	342
HV01		410	410	410	410	410	410
Y		1577	1577	1577	1577	1577	1577
Y1		1580	1580	1580	1580	1580	1580
Y2		1380	1380	1380	1380	1380	1380
Y3		1765	1765	1765	1765	1765	1765
Y4		1050	1050	1050	1050	1270	1270
Z		1627	1627	1820	1820	1820	1820
Z2		1581	1581	1780	1780	1780	1780
Z5		1716	1716	1716	1716	2175	2175
Z6		1531	1531	1531	1531	1990	1990

All dimensions are in millimetres unless otherwise specified.

		CREW VAN		
Version		**L3**	**L3**	
Drive		**Front wheel drive**	**Rear wheel drive** (single wheels)	**Rear wheel drive** (twin wheels)
Roof		**H2**	**H2**	**H2**
GVW		**3500 kg**	**3500 kg**	**3500/ 4500kg**
V	=Z6*Y3*EC18	**8,8 m³**	**8,4 m³**	**8,4 m³**
A		4332	3682	3682
B		6198	6198	6198
C		842	842	842
D		1024	1674	1674
E		1750	1750	1750
F		1730	1730	1612
G		2070	2070	2070
G1		2470	2470	2470
H	MVODM Min / Max GVW Min	2475 / 2488 2418	2507 / 2527 2452	2533 / 2549 2438
H2	MVODM / GVW	Min: 2511/ 2451 Max: 2526/ 2462	Min: 2549/ 2490 Max:2574/ 2506	Min : 2590/ 2475 Max: 2611/ 2490
J1	MVODM	Min : 543 Max : 557	Min : 674 Max : 696	Min : 706 Max : 724
K	GVW	Min : 172 Max : 181	Min : 197 Max : 208	Min : 181 Max : 191
HV02		742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)
W1		1749	1749	1749
HV07		1017	1017	1017
EC18		1894	1798	1798
VO10		365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)
VO11		342	342	342
HV01		410	410	410
Y		1577	1577	1577
Y1		1580	1580	1580
Y2		1380	1380	1080
Y3		1765	1765	1765
Y4		1270	1270	1270
Z		1820	1724	1724
Z2		1780	1684	1684
Z5		2825	2825	2825
Z6		2640	2640	2640

All dimensions are in millimetres unless otherwise specified.

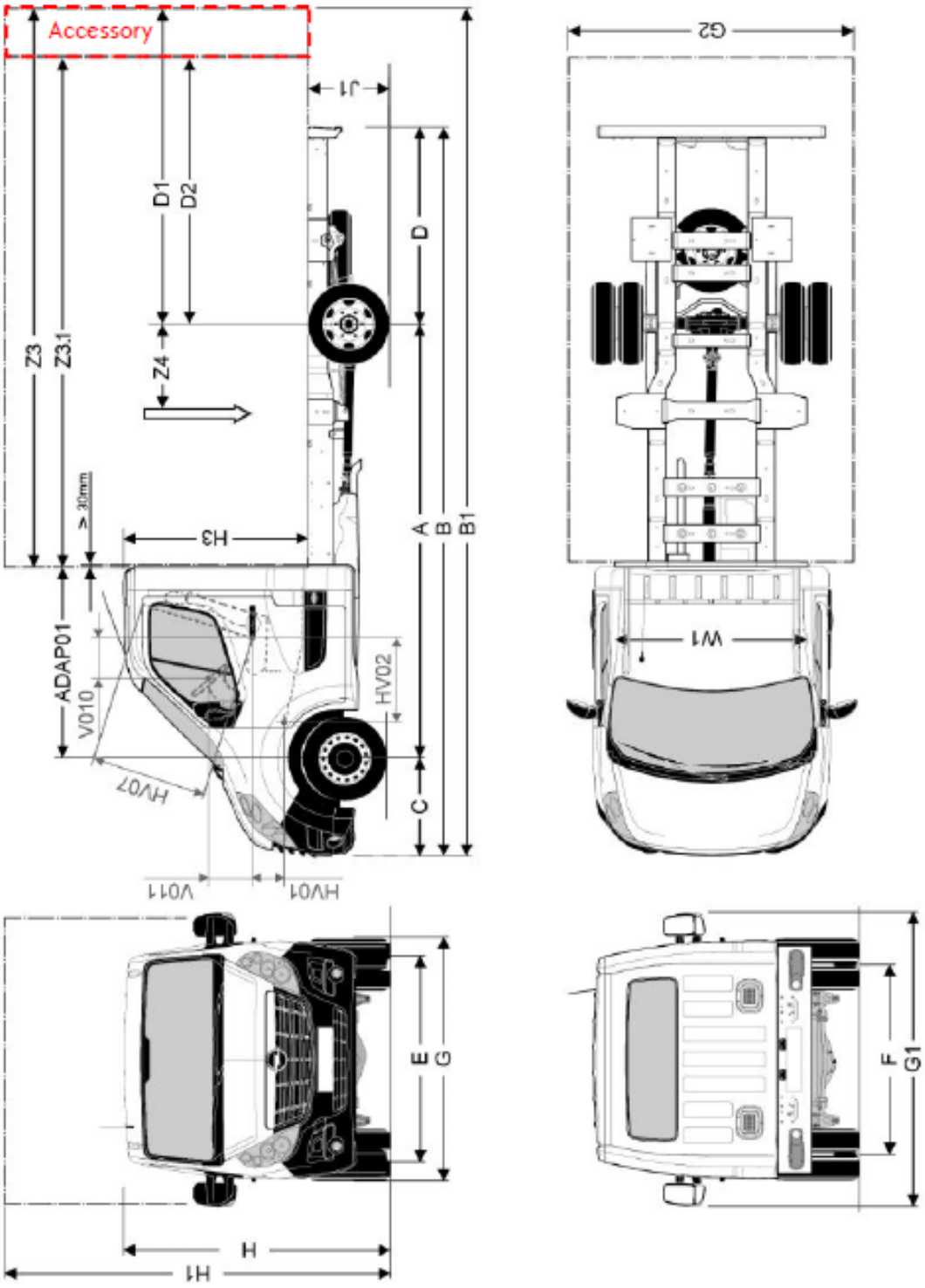
– Combi



		COMBI			
Version		**L1**		**L2**	
Drive		**Front wheel drive**		**Front wheel drive**	
Roof		**H1**		**H2**	
GVW		**3000 kg**	**3300 kg**	**3300 kg**	**3500 kg**
V	=Z6*Y3*EC18				
A		3182	3182	3682	3682
B		5048	5048	5548	5548
C		842	842	842	842
D		1024	1024	1024	1024
E		1750	1750	1750	1750
F		1730	1730	1730	1730
G		2070	2070	2070	2070
G1		2470	2470	2470	2470
H	MVODM Max	2307	2307	2499	2499
H2	MVODM / GVW	Min: 2303/ 2213 Max: 2320/ 2227	Min: 2303/ 2213 Max: 2320/ 2227	Min: 2517/ 2444 Max:2533/ 2455	Min: 2517/ 2444 Max:2533/ 2455
J1	MVODM	Max : 564	Max : 564	Max : 558	Max : 562
K	GVW				
HV02		742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)
W1		1749	1749	1749	1749
HV07		1017	1017	1017	1017
EC18		1650	1650	1850	1850
VO10		365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)
VO11		342	342	342	342
HV01		410	410	410	410
Y		1577	1577	1577	1577
Y1		1580	1580	1580	1580
Y2		1380	1380	1380	1380
Y3		1765	1765	1765	1765
Y4		1050	1050	1270	1270
Z		1627	1627	1820	1820
Z2		1581	1581	1780	1780
Z7		948	948	1448	1448
Z8		1757	1757	2257	2257

All dimensions are in millimetres unless otherwise specified.

– Chassis cab


Accessory
J1
D1
D2
D
Z3
Z3.1
Z4
≥ 30mm
H3
A
B
B1
ADAP01
V010
HV02
HV07
C
V011
HV01
G2
W1
E
G
H
H1
F
G1

		CHASSIS CAB		
Version		**L2**	**L25**	**L3**
Drive		**Front wheel drive**		
Roof		**H1**	**H1**	**H1**
GVW		**3500 kg**	**3500 kg**	**3500 kg**
A		3682	4006	4332
B		5643	5967	6293
B1 *	= C+A+D1max	5924	6622	7298
C		842	842	842
D		1119	1119	1119
D1 *		1400	1774	2124
D2 *		1400	1774	2124
E		1750	1750	1750
F	normal / extended	1730/1860	1730/1860	1730/1860
G		2070	2070	2070
G1		2470 / 2654	2470 / 2654	2470 / 2654
G2 *		2170 / 2350	2170 / 2350	2170 / 2350
H	MVODM Min / Max	2259 / 2265	2256 / 2261	2252 / 2258
H1		3500	3500	3500
H3		1569	1569	1569
J1	MVODM Min / Max	735 / 740	735/740	736 / 741
HV02		742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)
W1		1749	1749	1749
HV07		1017	1017	1017
VO10		365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)
VO11		342	342	342
HV01		410	410	410
ADAP01		1616	1616	1616
Z3 * / **	Min / Max	3185 / 3466	3509 / 4164	3835 / 4840
Z3.1 * / **	Min / Max	3185 / 3466	3509 / 4164	3835 / 4840
Z4	Min / Max	331 / 905	306 / 927	294 / 948

All dimensions are in millimetres unless otherwise specified.

* These dimensions are maximum values and serve as guidelines for the conversion; according to the centre of gravity it must be adjusted.

** Distance from the conversion to the cabin must be at least 30mm.

Consider also the notes at the end of the chapter 2.1.2

		CHASSIS CAB				
Version		**L2**	**L3**	**L2**	**L3**	**L4**
Drive		**Rear wheel drive** (single wheels)		**Rear wheel drive** (twin wheels)		
Roof		**H1**	**H1**	**H1**	**H1**	**H1**
GVW		**3500 kg**	**3500 kg**	**3500/ 4500 kg**	**3500/ 4500 kg**	**3500/ 4500 kg**
A		3682	4332	3682	3682	4332
B		5643	6293	5643	6193	6843
B1 *	= C+A+D1max	6754	7384	6734	6734	7928
C		842	842	842	842	842
D		1119	1119	1119	1669	1669
D1 *		2230	2210	2210	2210	2754
D2		1917	2100	2100	2100	2100
E		1750	1750	1750	1750	1750
F		1730	1730	1612	1612	1612
G		2070	2070	2070	2070	2070
G1		2470 / 2654	2470 / 2654	2470 / 2654	2470 / 2654	2470 / 2654
G2 *		2170 / 2350	2170 / 2350	2170 / 2350	2170 / 2350	2170 / 2350
H	MVODM Min / Max	2279 / 2284	2270 / 2276	2278 / 2283	2278 / 2283	2267 / 2273
H1		3500	3500	3500	3500	3500
H3		1569	1569	1569	1569	1569
J1	MVODM Min / Max	771 / 774	771 / 775	784 / 787	784 / 787	786 / 789
HV02		742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)
W1		1749	1749	1749	1749	1749
HV07		1017	1017	1017	1017	1017
VO10		365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)
VO11		342	342	342	342	342
HV01		410	410	410	410	410
ADAP01		1616	1616	1616	1616	1616
Z3 * / **	Min / Max	3185 / 4296	3835 / 4926	3185/ 4276	3735 / 4275	4385 / 5470
Z3.1 * / **	Min / Max	3184 / 3983	3834 / 4816	3184 / 4165	3734 / 4166	4384 / 4816
Z4 (Ys *)**	Min / Max	-83 / 1007	-160 / 1062	68 / 578	68 / 578	-200 / 562

All dimensions are in millimetres unless otherwise specified.

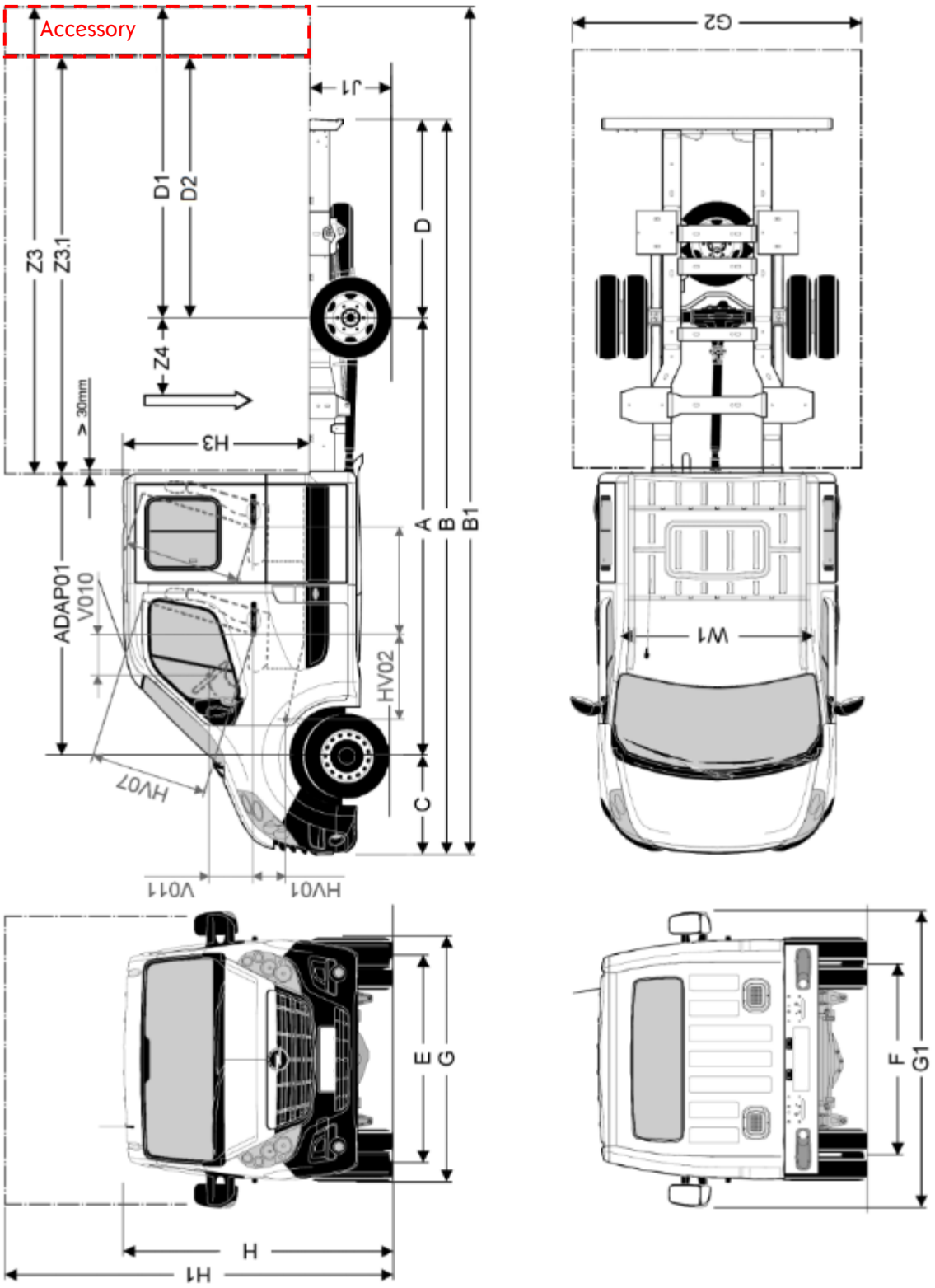
* These dimensions are maximum values and serve as guidelines for the conversion; according to the centre of gravity it must be adjusted.

** Distance from the conversion to the cabin must be at least 30mm.

*** Centre of gravity of the added conversion by converter with payload in the rearmost position.

Consider also the notes at the end of the chapter 2.1.2

– Chassis crew cab



		CHASSIS CREW CAB					
Version		**L2**	**L3**	**L2**	**L3**	**L3**	**L4**
Drive		**Front wheel drive**		**Rear wheel drive** (single wheels)		**Rear wheel drive** (twin wheels)	
Roof		**H1**	**H1**	**H1**	**H1**	**H1**	**H1**
GVW		**3500 kg**	**3500 kg**	**3500 kg**	**3500 kg**	**3500/ 4500 kg**	**3500/ 4500 kg**
A		3682	4332	3682	4332	3682	4332
B		5643	6293	5643	6293	6193	6843
B1 *	= C+A+D1max	5724	7252	6441	8134	6624	7645
C		842	842	842	842	842	842
D		1119	1119	1119	1119	1669	1669
D1 *		1200	2078	1917	2960	2100	2471
D2 *		1200	2078	1917	2100	2100	2100
E		1750	1750	1750	1750	1750	1750
F		1730	1730	1730	1730	1612	1612
G		2070	2070	2070	2070	2070	2070
G1		2470 / 2654	2470 / 2654	2470 / 2654	2470 / 2654	2470 / 2654	2470 / 2654
G2 *		2170 / 2350	2170 / 2350	2170 / 2350	2170 / 2350	2170 / 2350	2170 / 2350
H	MVODM Min / Max	2266 / 2272	2258 / 2263	2290 / 2295	2280 / 2285	2295 / 2301	2282 / 2286
H1		3500	3500	3500	3500	3500	3500
H3		1569	1569	1569	1569	1569	1569
J1	MVODM Min / Max	727 / 732	731 / 736	760 / 764	765 / 768	775 / 780	778 / 781
HV02		742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)
W1		1749	1749	1749	1749	1749	1749
HV07		1017	1017	1017	1017	1017	1017
VO10		365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)
VO11		342	342	342	342	342	342
HV01		410	410	410	410	410	410
ADAP01		2366	2366	2366	2366	2366	2366
Z3 * / **	Min / Max	2435 / 2516	3085 / 4044	2435 / 3232	3085 / 4926	2985 / 3416	3635 / 4436
Z3.1 * / **	Min / Max	2435 / 2516	3085 / 4044	2435 / 3232	3085 / 4066	2985 / 3416	3635 / 4065
Z4 (Ys *)**	Min / Max	97 / 483	-58 / 24	-200 / 648	-200 / 152	-131 / 263	-200 / -1

All dimensions are in millimetres unless otherwise specified.

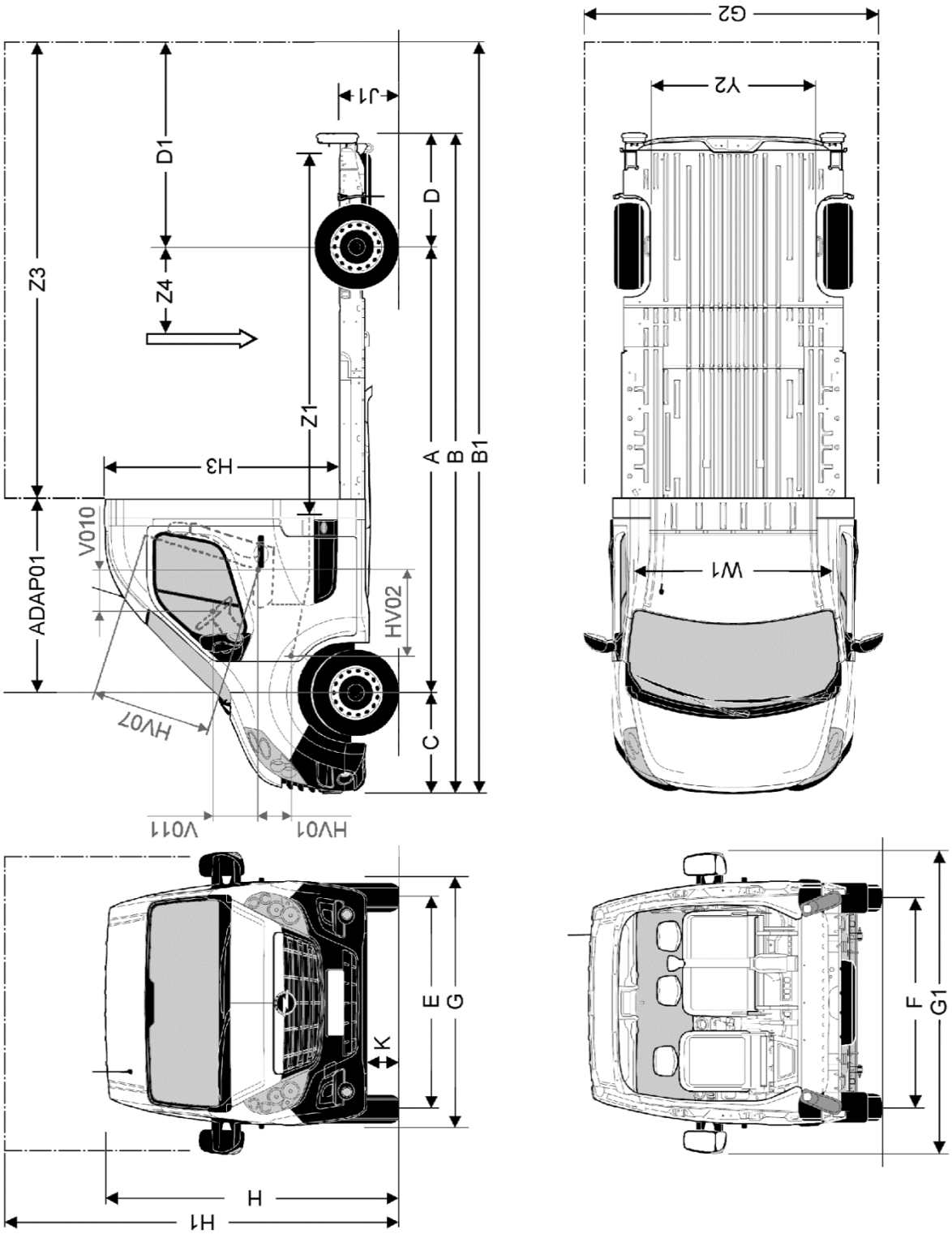
* These dimensions are maximum values and serve as guidelines for the conversion; according to the centre of gravity it must be adjusted.

** Distance from the conversion to the cabin must be at least 30mm.

*** Centre of gravity of the added conversion by converter with payload in the rearmost position.

Consider also the notes at the end of the chapter 2.1.2

– Platform cab

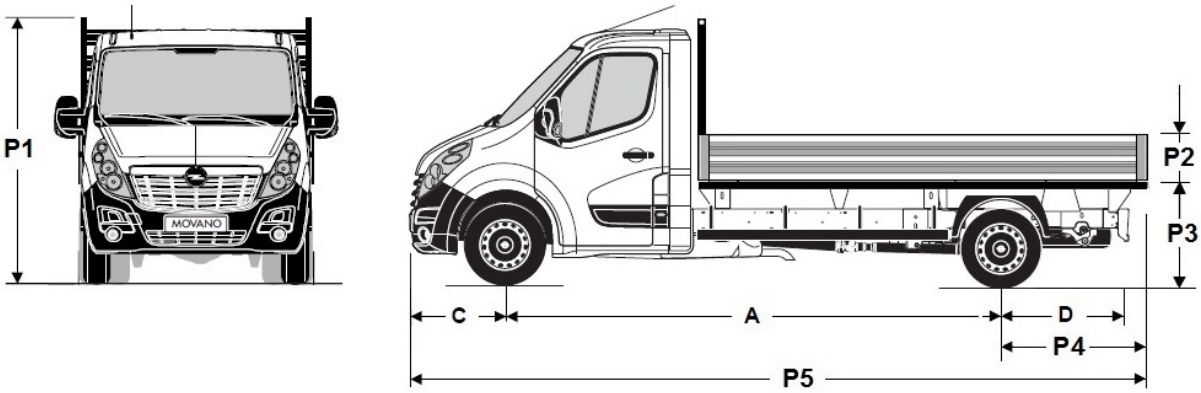


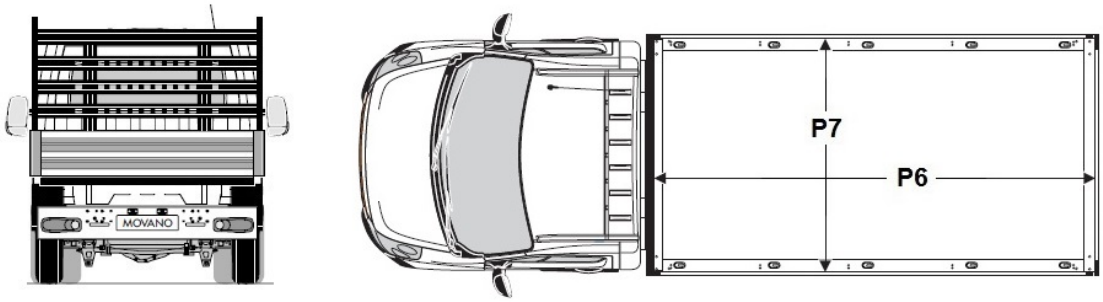
		PLATFORM-CAB				
Version		**L1**	**L2**		**L3**	
Drive		**Front wheel drive**	**Front wheel drive**		**Front wheel drive**	
Roof		**H1**	**H1**	**H2**	**H1**	**H2**
GVW		**3500 kg**	**3500 kg**		**3500 kg**	
A		3182	3682	3682	4332	4332
B		5030	5530	5530	6180	6180
B1 *	= C+A+D1max	5030	5751	5790	7364	7364
C		842	842	842	842	842
D		1006	1006	1006	1006	1006
D1 *		1006	1227	1266	2190	2190
E		1750	1750	1750	1750	1750
F	normal / extended	1730	1730/1860	1730/1860	1730/1860	1730/1860
G		2070 / 2095	2070 / 2095	2070 / 2095	2070 / 2095	2070 / 2095
G1		2470 / 2654	2470 / 2654	2470 / 2654	2470 / 2654	2470 / 2654
G2 *		2170 / 2350	2170 / 2350	2170 / 2350	2170 / 2350	2170 / 2350
H	MVODM Min / Max	2270 / 2276	2264 / 2270	2457 / 2463	2258 / 2264	2451 / 2457
H1		3500	3500	3500	3500	3500
H3		1748	1748	1942	1748	1942
J	MVODM Min / Max	580 / 585	581 / 585	581 / 584	579 / 583	579 / 583
K	GVW	166	166	166	166	166
HV02		742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)	742 (DAD = 742)
W1		1749	1749	1749	1749	1749
HV07		1017	1017	1017	1017	1017
VO10		365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)	365 (DAD = 385)
VO11		342	342	342	342	342
HV01		410	410	410	410	410
ADAP01		1596	1596	1596	1596	1596
Z1		2583	3083	3083	3733	3733
Z3 *	Min / Max	2592 / 2592	3092 / 3313	3092 / 3352	3742 / 4926	3742 / 4926
Z4	Min / Max	279 / 851	418 / 999	398 / 981	433 / 1092	408 / 1068

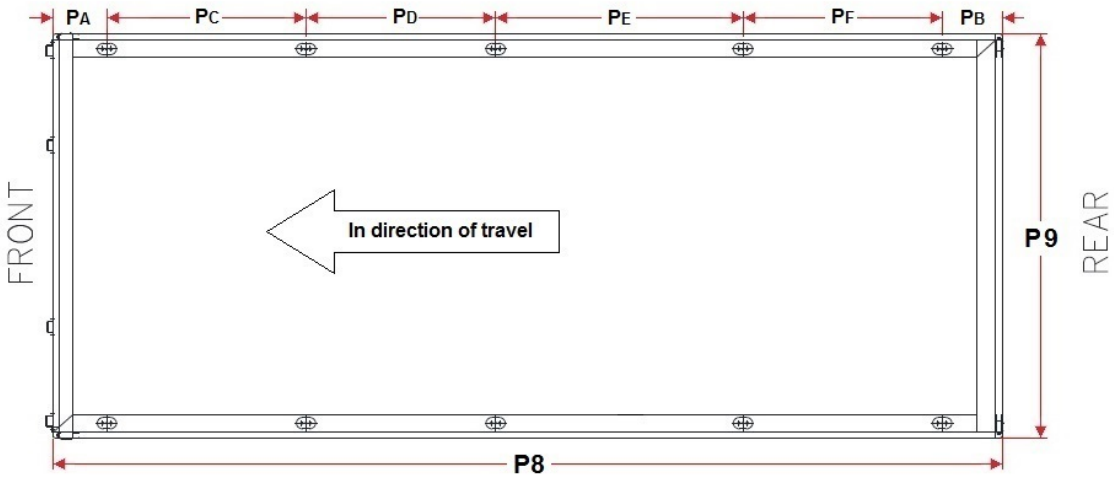
All dimensions are in millimetres unless otherwise specified.

* These dimensions are maximum values and serve as guidelines for the conversion; according to the centre of gravity it must be adjusted.

– Chassis cab with dropside ex Opel plant [Only the model 05DD1]



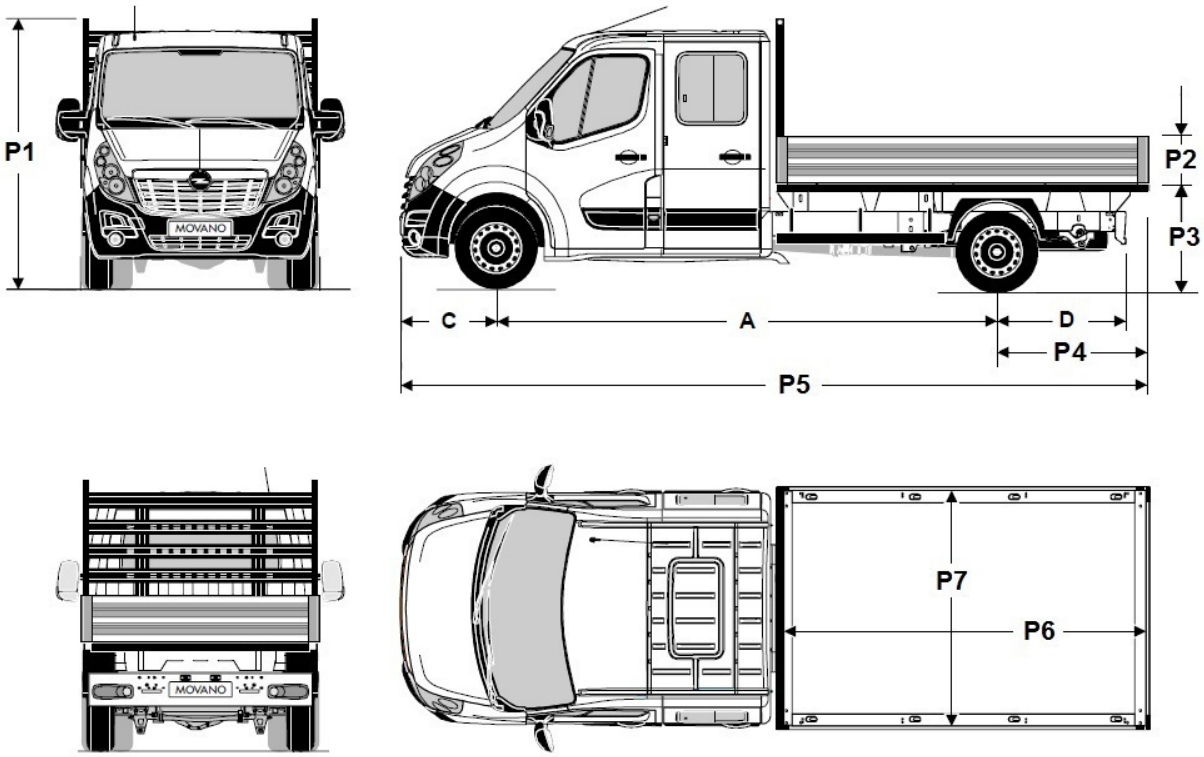


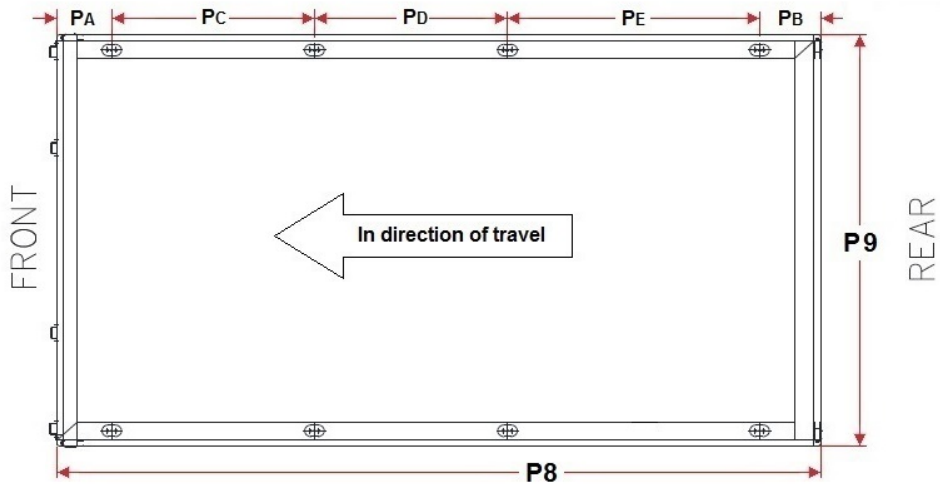


	Dimensions of the dropside ex Opel plant on chassis cab [mm]					
Drive	**FWD**		**RWD (single wheel)**		**RWD (twin wheels)**	
Length version	**L2**	**L3**	**L2**	**L3**	**L3**	**L4**
Roof version	**H1**	**H1**	**H1**	**H1**	**H1**	**H1**
GVW	**3500 kg**	**3500 kg**	**3500 kg**	**3500 kg**	**3500/ 4500 kg**	**3500/ 4500 kg**
Number of lashing eyes	**8**	**10**	**8**	**10**	**8**	**10**
A	3682	4332	3682	4332	3682	4332
C	842	842	842	842	842	842
D	1119	1119	1119	1119	1669	1669
P1	2350	2350	2350	2350	2375	2375
P2	400	400	400	400	400	400
P3	1026	1026	1026	1026	1026	1026
P4	1225	1244	1225	1244	1775	1775
P5	5749	6418	5749	6418	6299	6949
P6	3170	3840	3170	3840	3720	4370
P7	2040	2040	2040	2040	2040	2040
P8	3230	3900	3230	3900	3780	4430
P9	2100	2100	2100	2100	2100	2100
PA	250	250	250	250	250	250
PB	280	280	280	280	280	280
PC	1140	935	1140	935	1150	930
PD	1095	940	1095	940	1180	885
PE	465	1010	465	1010	920	1155
PF	–	485	–	485	–	930

* Dimensions apply only to the dropside with the Opel model reference 05DD1. It concerns the dropsides of the company Scattolini. (steel substructure and aluminium sideboards).

– Chassis crew cab with dropside ex Opel plant [Only the model 05DD1]





	Dimensions of the dropside ex Opel plant on chassis crew cab [mm]					
Drive	**FWD**		**FWD**		**FWD**	
Length version	**L2**	**L3**	**L2**	**L3**	**L3**	**L4**
Roof version	**H1**	**H1**	**H1**	**H1**	**H1**	**H1**
GVW	**3500 kg**	**3500 kg**	**3500 kg**	**3500 kg**	**3500/ 4500 kg**	**3500/ 4500 kg**
Number of lashing eyes	**8**	**8**	**8**	**8**	**8**	**8**
A	3682	4332	3682	4332	3682	4332
C	842	842	842	842	842	842
D	1119	1119	1119	1119	1669	1669
P1	2350	2350	2350	2350	2375	2375
P2	400	400	400	400	400	400
P3	1026	1026	1026	1026	1026	1026
P4	1225	1325	1225	1325	1874	1874
P5	5749	6499	5749	6499	6398	7048
P6	2420	3170	2420	3170	3070	3722
P7	2040	2040	2040	2040	2040	2040
P8	2480	3230	2480	3230	3130	3780
P9	2100	2100	2100	2100	2100	2100
PA	250	250	250	250	250	250
PB	280	280	280	280	280	280
PC	495	1140	495	1140	485	1130
PD	1000	1080	1000	1080	1115	1150
PE	455	480	455	480	1000	970

* Dimensions apply only to the dropside with the Opel model reference 05DD1. It concerns the dropsides of the company Scattolini. (steel substructure and aluminium sideboards).

Legend		
A	=	Wheelbase
ADAP01	=	Horizontal distance between front wheel and rear panel of the cabin
B	=	Overall length
B1 *	=	Maximum overall length of the vehicle (B1 = C+A+D1max)
C	=	Front overhang
D	=	Rear overhang
D1 *	=	Maximum extension of rear overhang including accessories
D2 *	=	Maximum extension of rear overhang without accessories. The area between D2 and D1 can be utilized only for accessories that are used when the vehicle is stopped; for example a tailgate

Legend		
E	=	Front Track
EC18	=	Maximal headroom in cargo area
F	=	Rear Track
G	=	Overall width (without rear-view mirrors)
G1	=	Overall width with series rear-view mirrors/ with extended rear-view mirrors
G2 *	=	Maximum overall cargo area width with series rear-view mirrors/ with long arm rear view mirrors (option)
H	=	Overall height
H1	=	Maximum overall height of the vehicle
H2	=	Overall height of open door
H3	=	Vertical distance between cab roof and rear side member
HV01	=	Vertical distance between heel point and H-point
HV02	=	Horizontal distance between accel pedal point and H-point driver seat
HV07	=	Height under percale at 14° 1st row, driver H-point
J1	=	Loading sill height
K	=	Ground clearance
P1	=	Total height with dropside
P2	=	Height of side boards, dropside
P3	=	Loading sill height, dropside
P4	=	Rear overhang with dropside
P5	=	Total length with dropside
P6	=	Length of loading area, dropside inside
P7	=	Wide loading area, dropside inside
P8	=	Length of loading area, dropside outside
P9	=	Wide loading area, dropside outside
PA	=	Distance between front board and lashing eye
PB	=	Distance between tailgate and lashing eye
PC	=	Distance lashing eye to lashing eye
PD	=	Distance lashing eye to lashing eye
PE	=	Distance lashing eye to lashing eye
PF	=	Distance lashing eye to lashing eye
V	=	Max. cargo volume (V = Z1*Y3*EC18) or (V=Z6*Y3*EC18)
VO10	=	Horizontal distance between H-point and steering wheel
VO11	=	Vertical distance between H-point and steering wheel
W1	=	Front shoulder width
Y	=	Door sill upper portion width (at 1069 mm above floor)

Legend		
Y1	=	Door sill lower portion width (at 169 mm above floor)
Y2	=	Width between wheel arches
Y3	=	Cargo area width
Y4	=	Sliding door sill width (at 1100 mm above floor)
Z	=	Rear door sill height (Y0)
Z1	=	Cargo area length Y0 on floor
Z1'	=	Cargo area length (at 1100 mm above the floor)
Z2	=	Sliding door sill height
Z3 */**	=	Maximum overall conversion body length including accessories
Z3.1 */**	=	Maximum load area. The area between Z3 and Z3.1 can be utilized only for accessories that are used when the vehicle is stopped; for example a tailgate
Z4	=	Load application
Z5	=	Cargo area length Y0 on floor
Z6	=	Cargo area length (at 1100 mm above the floor)
Z7	=	Cargo area length behind the 3rd seat row
Z8	=	Cargo area length behind the 2nd seat row
GVW	=	Gross vehicle weight
MVODM	=	Kerb weight

* These dimensions are maximum values and serve as guidelines for the conversion; according to the centre of gravity it must be adjusted.

** For chassis cab and chassis crew cab only. Distance from the conversion to the cabin must be at least 30mm.

Note:

The coach builder must indicate the position of the centre of gravity of the conversion added with the available payload for respecting the max. front and rear axle and front axle system technique (see table of weights).

On the **"front wheel drive" versions**, the basic values to be taken into account for the length conversions are **D1, Z3** and **Ys**.

- Exceeding values D1 and Z3 is at the entire responsibility of the coach builder.
- The Ys value must not be exceeded (limit position) of the centre of gravity of the loaded conversion).

On the **"rear wheel drive" versions**, the basic values to be taken into account for the length conversions are **D2, Z3.1 max.** and **Ys.**

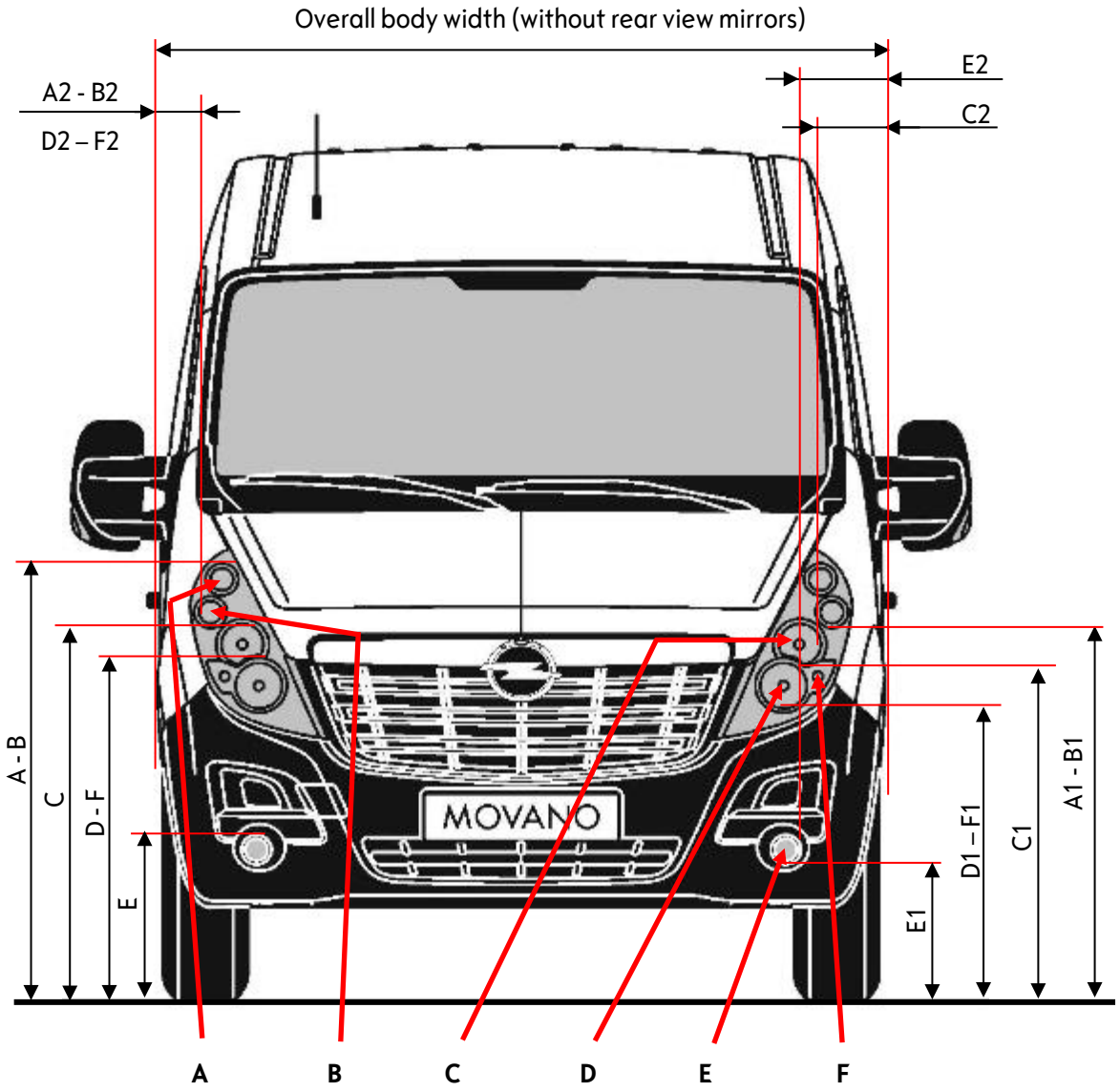
- Values D2 and Z3.1 must not be exceeded.
- The Ys value must not be exceeded (limit position) of the centre of gravity of the loaded area.

The Ys and Z4 dimension is positive when the centre of gravity of the loading is located in front of the rear axles.

Further information about the value Ys, see also chapter 3.1.1 and 3.1.2.

2.1.3 EXTERIOR LIGHTNING – EUROPEAN REGULATIONS

Front zone all types

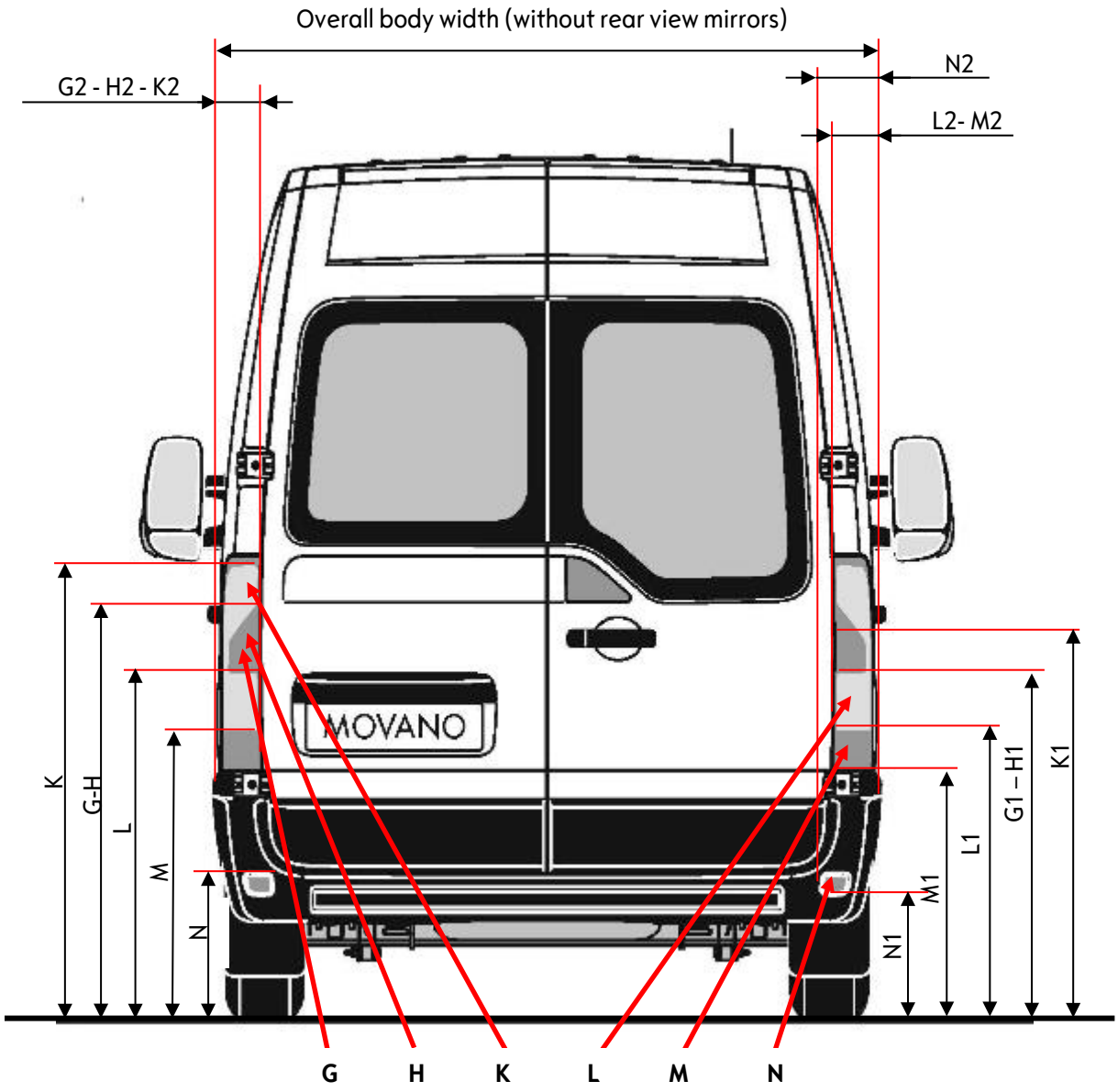


FRONT LAMPS

A: INDICATOR			B: POSITION			C: MAIN BEAM			D: DIPPED BEAM			E: FOG LAMP			F: FIXED BENDING LAMP*		
A	A1	A2	B	B1	B2	C	C1	C2	D	D1	D2	E	E1	E2	F	F1	F2
1500	350	400	1500	350	400	**	**	**	1200	500	400	**/**	250	400	1200	500	400

* = optional
** = no value imposed
*** = 800 for M1 and N1

Panel van rear zone all types

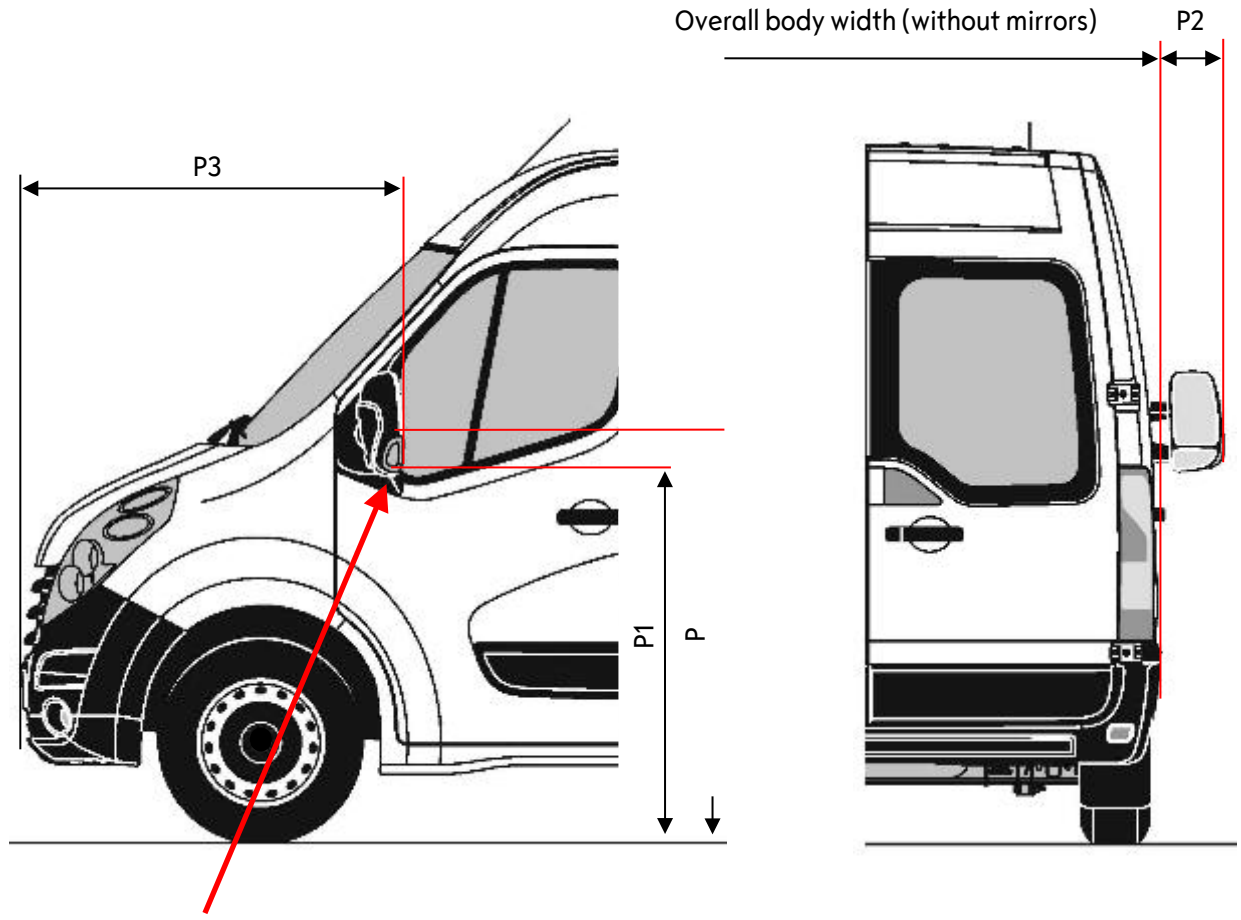


REAR LAMPS

G: BRAKE			H: POSITION			K: INDICATOR			L: REVERSE			M : FOG			N: REFLECTOR		
G	G1	G2	H	H1	H2	K	K1	K2	L	L1	L2	M	M1	M2	N	N1	N2
1500	350	400	1500	350	400	1500	350	400	1200	250	**	1000	250	**	900	250	400

** = no value imposed

Side zone all types



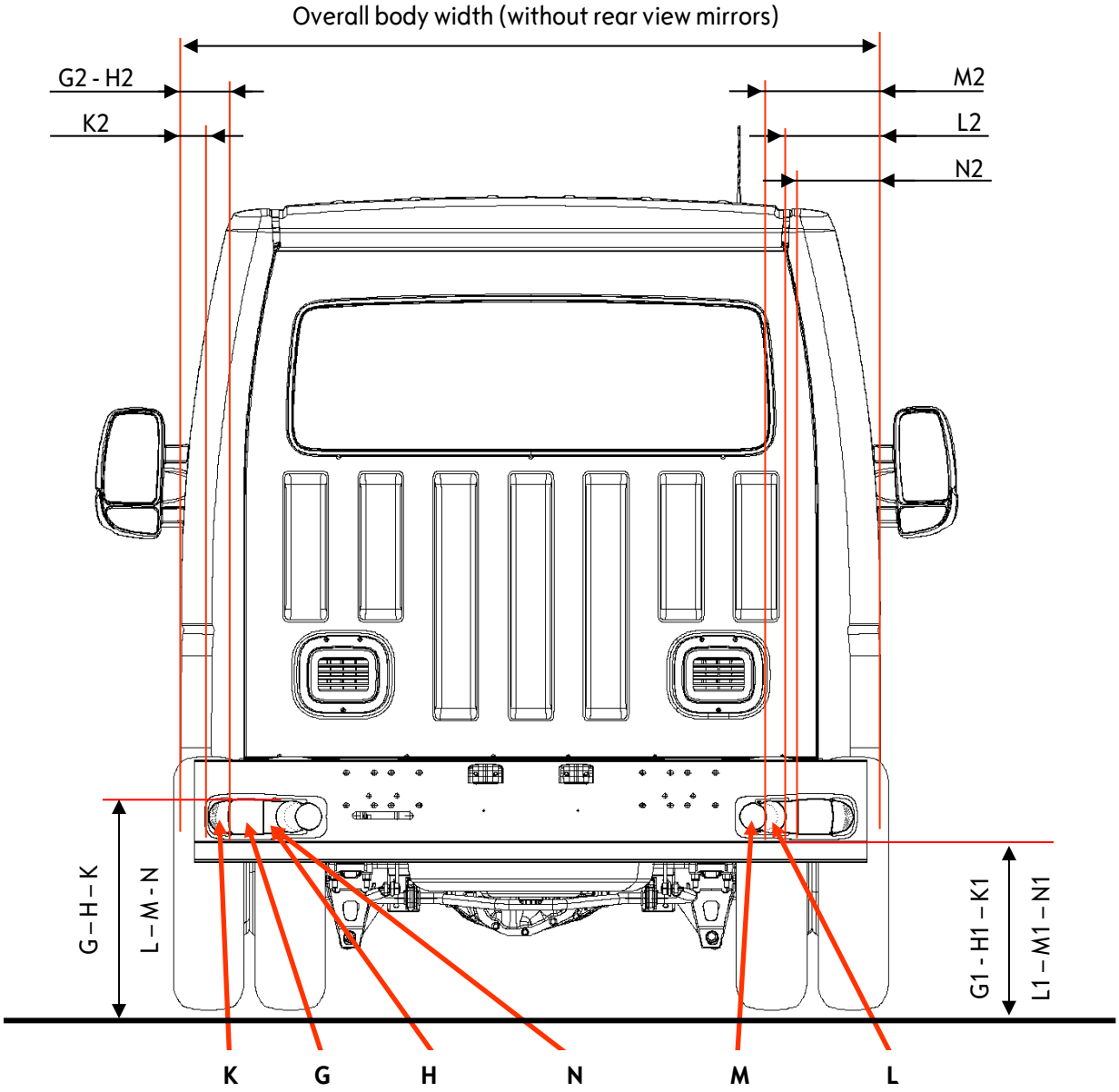
Side indicators

P	P1	P2	P3
1,500	500 *	400	1,800 Max

* = 350 for M1 and N1

For more information, also see 4.11.4.

Details of chassis version all types



Rear lamps of chassis version

G : BRAKE			H : POSITION			K : INDICATOR			L : REVERSE			M : FOG			N : REFLECTOR		
G	G1	G2	H	H1	H2	K	K1	K2	L	L1	L2	M	M1	M2	N	N1	N2
1500	350	400	1500	350	400	1500	350	400	1200	250	**	1000	250	**	900	250	400

** = no value imposed

Additional information

If the vehicle overall width > 2100mm:

– Mandatory use of gauge lights (2 front, 2 rear).

If the vehicle overall length < 6000mm:

– Side position indicator: fitted on the rear view mirror, with the type-approved choice of arm length according to the width of the body.

– The indicator is category 5, 5W bulb (type WY5W).

If the vehicle overall length > 6000mm:

– Provide the option for the indicator. The latter must be category 6, 16W bulb (type W16W).

– Side position indicator: fitted on the rear view mirror, with the type-approved choice of arm length according to the width of the body.

– Side position lamps and side reflectors are mandatory.

– Two reverse lamps.

Note:

There is the option UZB, for vehicles above a length of 6000mm. This includes preparation for side flashing lights (Type W16W). See also 4.11.4.

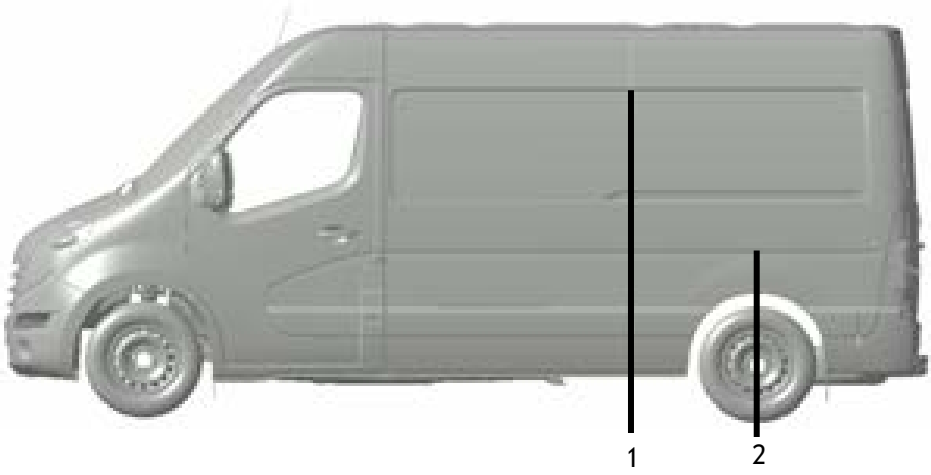
Attention:

National regulations apply to all lamp and turn signal units.

2.2 DIMENSIONS OF LOADING AREAS / REAR DOORS / SLIDING DOOR

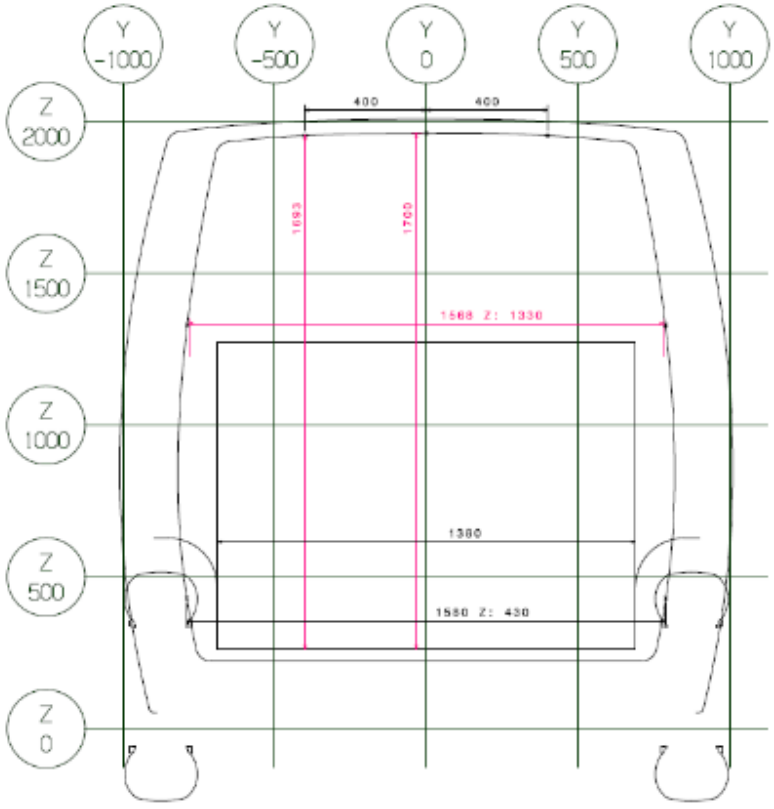
2.2.1 LOADING AREA

The main dimensions of the loading area (versions H1, H2, H3) are given in the form of superimposed sections. Details of the wheel arches are also given.

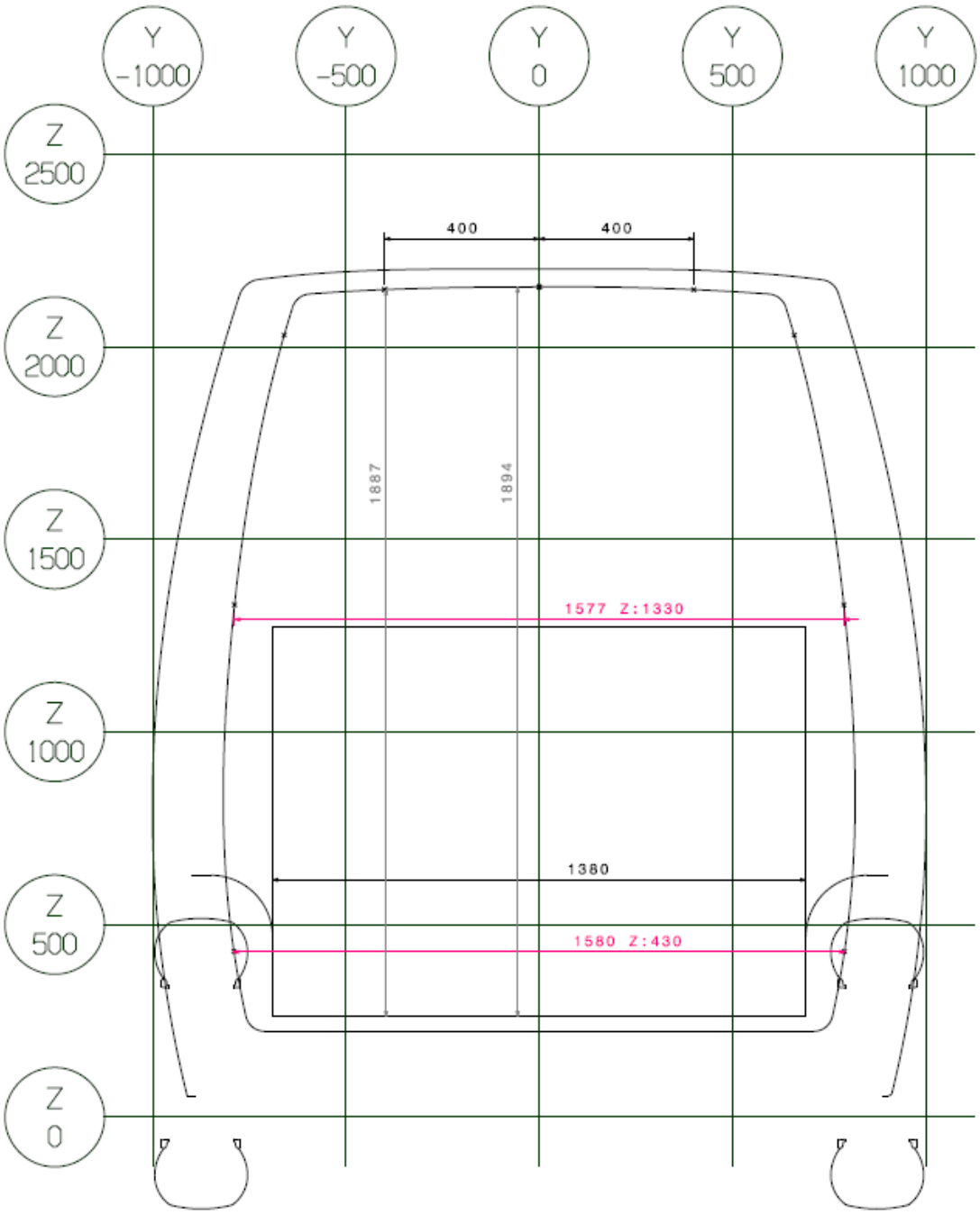


Pos.	Description
1	Loading area
2	Wheel arch

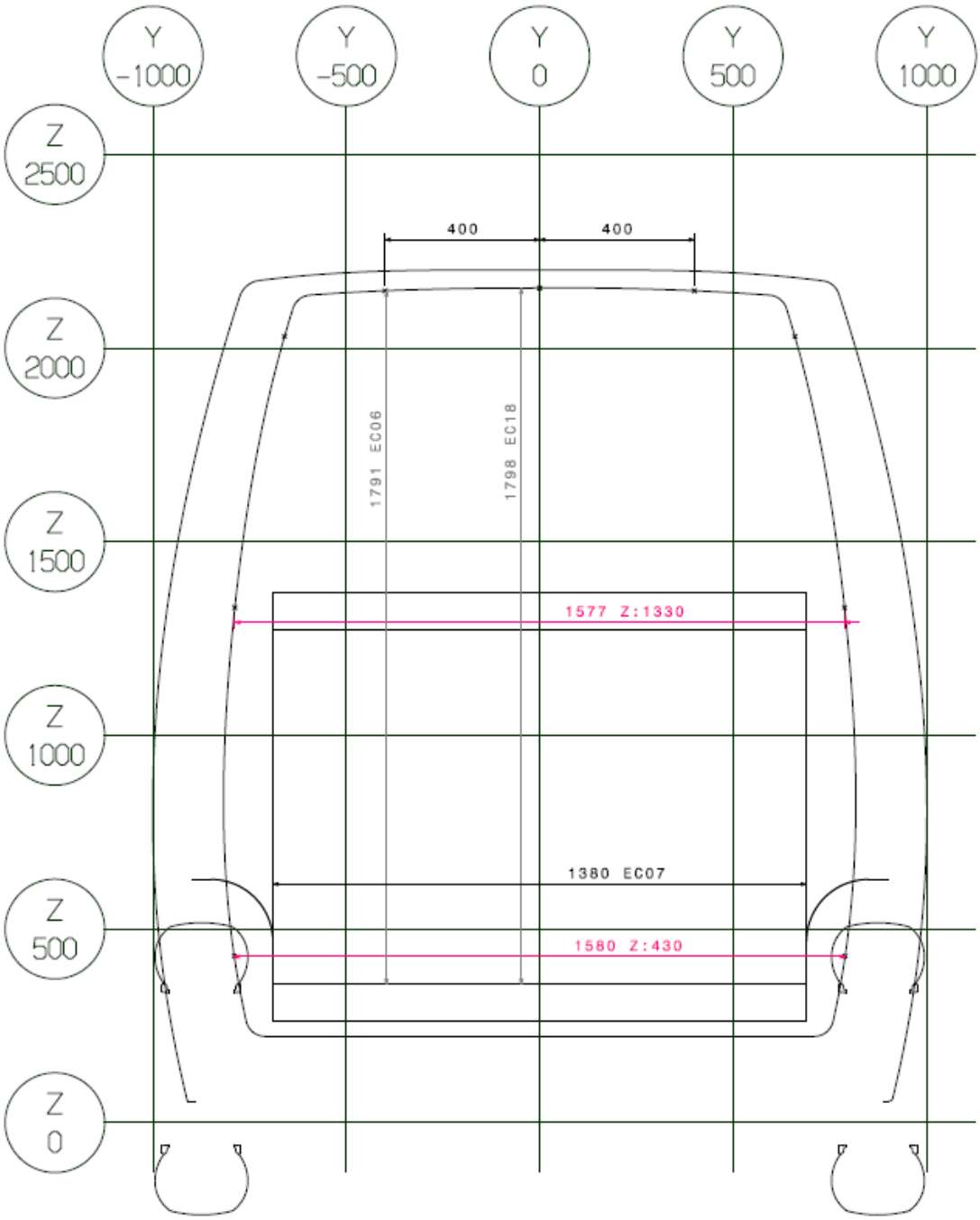
Panel van H1 roof, front wheel drive



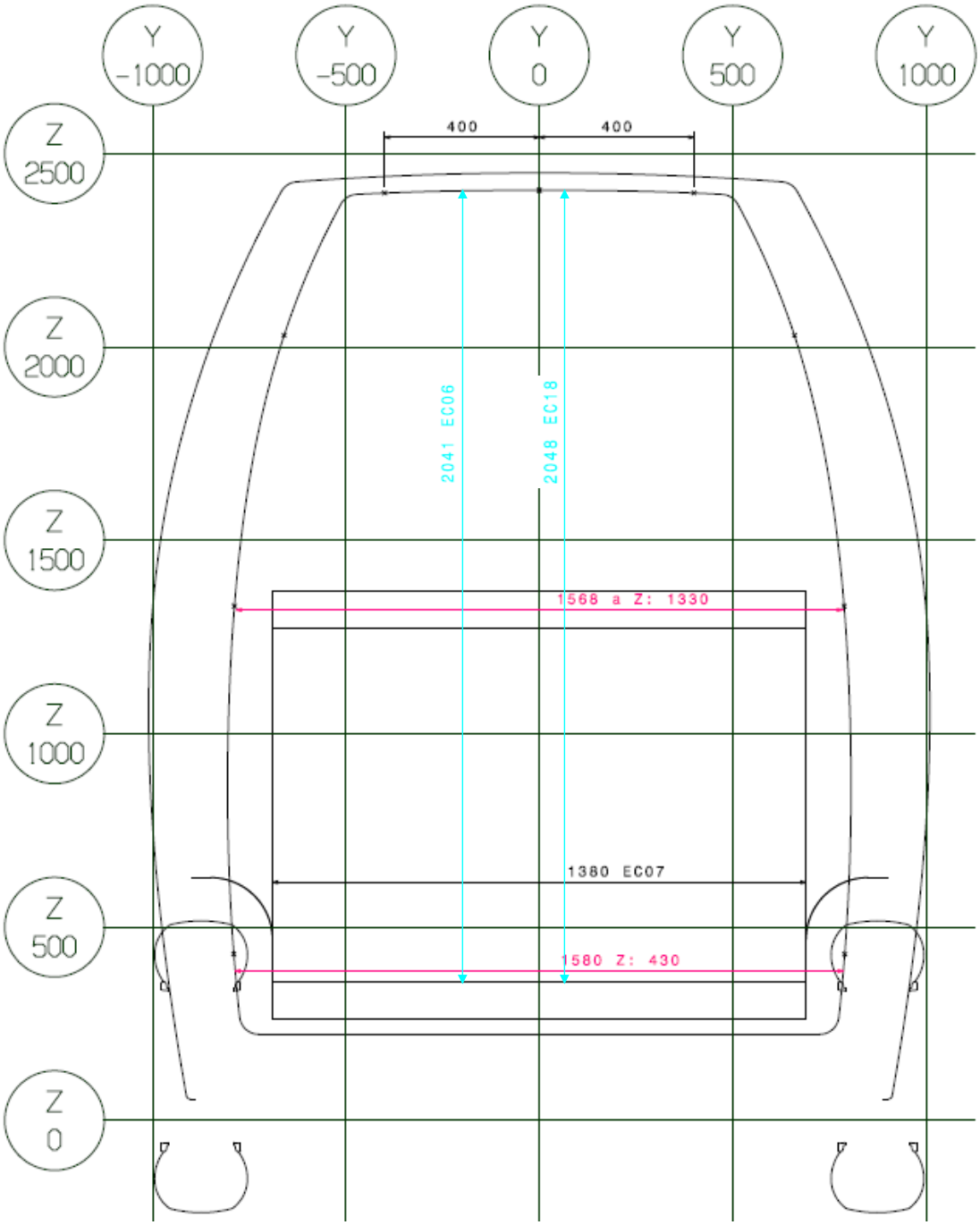
Panel van H2 roof, front wheel drive



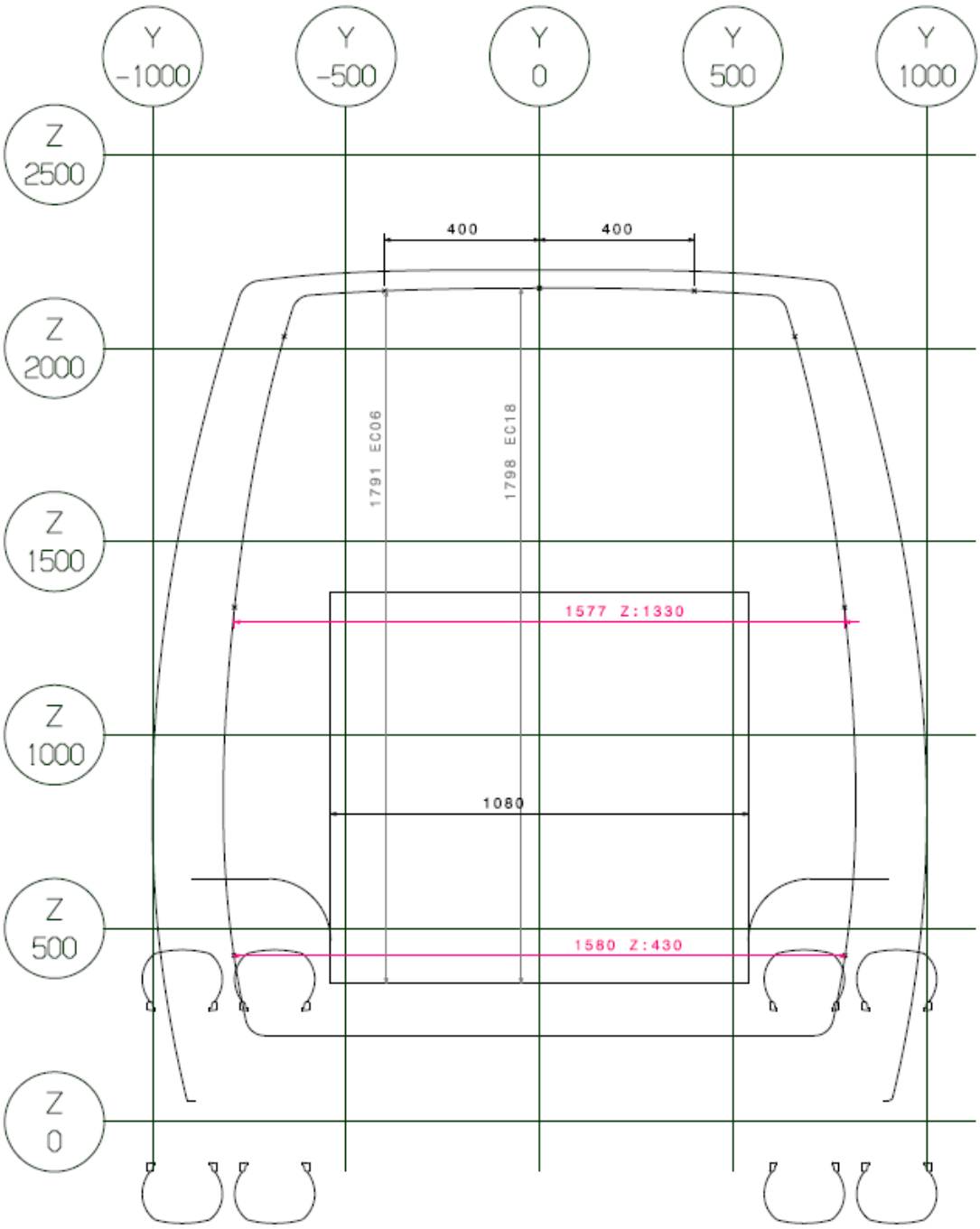
Panel van H2 roof, single wheel rear drive



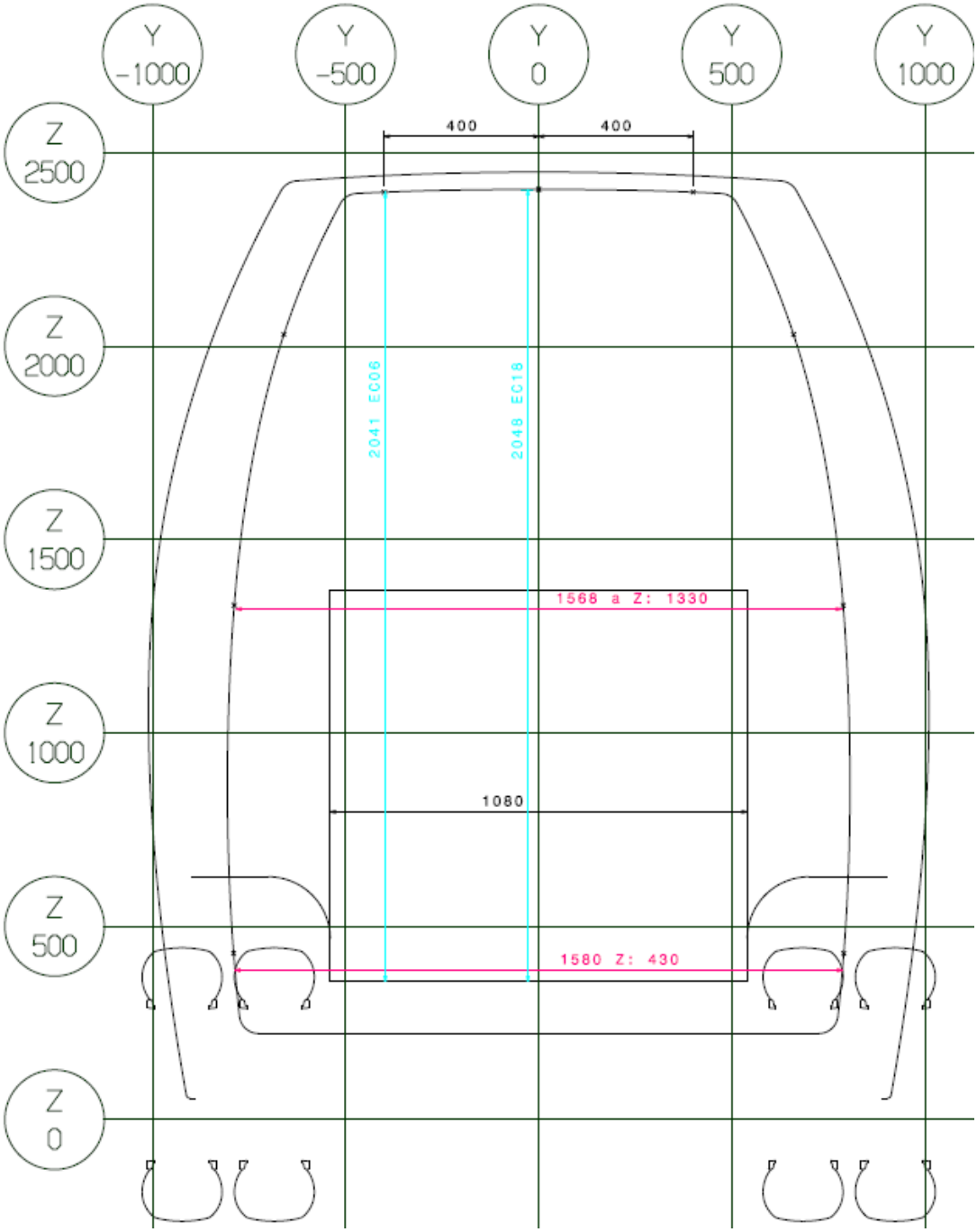
Panel van H3 roof, single wheel rear drive



Panel van H2 roof, twin wheel rear drive



Panel van H3 roof, twin wheel rear drive

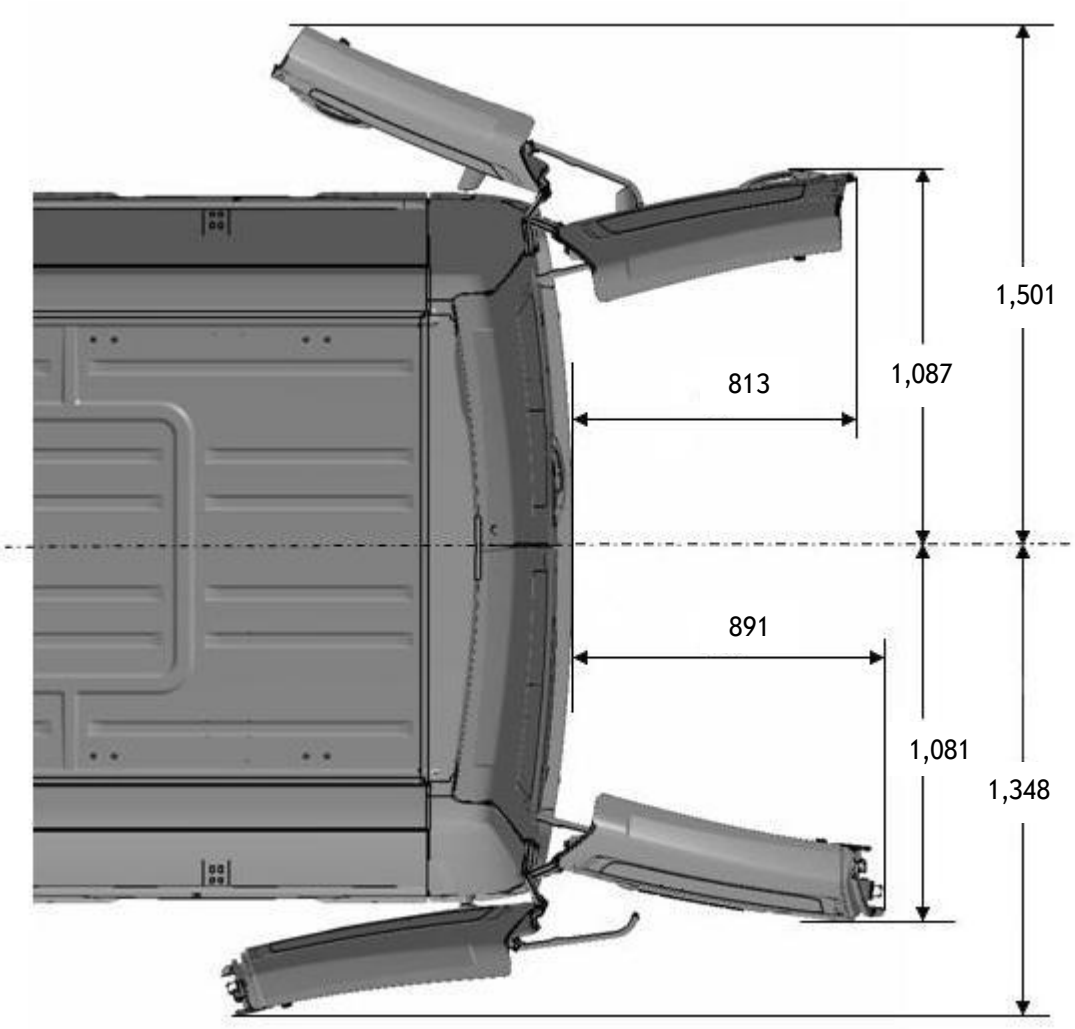


2.2.2 REAR SIDE DOORS, TRAVEL AND DIMENSIONS

The travel and position along the side of the body are given as overall dimensions and at different heights.

The door opening angle is 90° on the first notch and 176° on the second notch. With the 255° opening option, the maximum opening angle is 260° without the sliding side door and 242° with a sliding side door.

Rear door travel



Rear door dimensions

Vehicle length	L1					
Roof height	H1			H2		
Traction	FWD					
GVW (kg)	2,800	3,300	3,500	2,800	3,300	3,500
1 Door height (mm)	1,815			2,023		
2 Minimum height at GVW (mm)	436	407	398	445	416	408
3 Maximum height at kerb weight (mm)	2,317	2,317	2,320	2,533	2,533	2,536

Vehicle length	L2				L3	
Roof height	H2		H3		H2	H3
Traction	FWD					
GVW (kg)	3,300	3,500	3,300	3,500	3,500	
1 Door height (mm)	2,023					
2 Minimum height at GVW (mm)	427	421	427	421	428	428
3 Maximum height at kerb weight (mm)	2,530	2,533	2,529	2,532	2,526	2,524

Vehicle length	L3		L3		L4	
Roof height	H2	H3	H2	H3	H2	H3
Traction	RWD, single wheel		RWD, twin wheels			
GVW (kg)	3,500		4,500		3,500	
1 Door height (mm)	2,023					
2 Minimum height at GVW (mm)	467	467	452	453	464	464
3 Maximum height at kerb weight (mm)	2,574	2,572	2,611	2,609	2,600	2,599

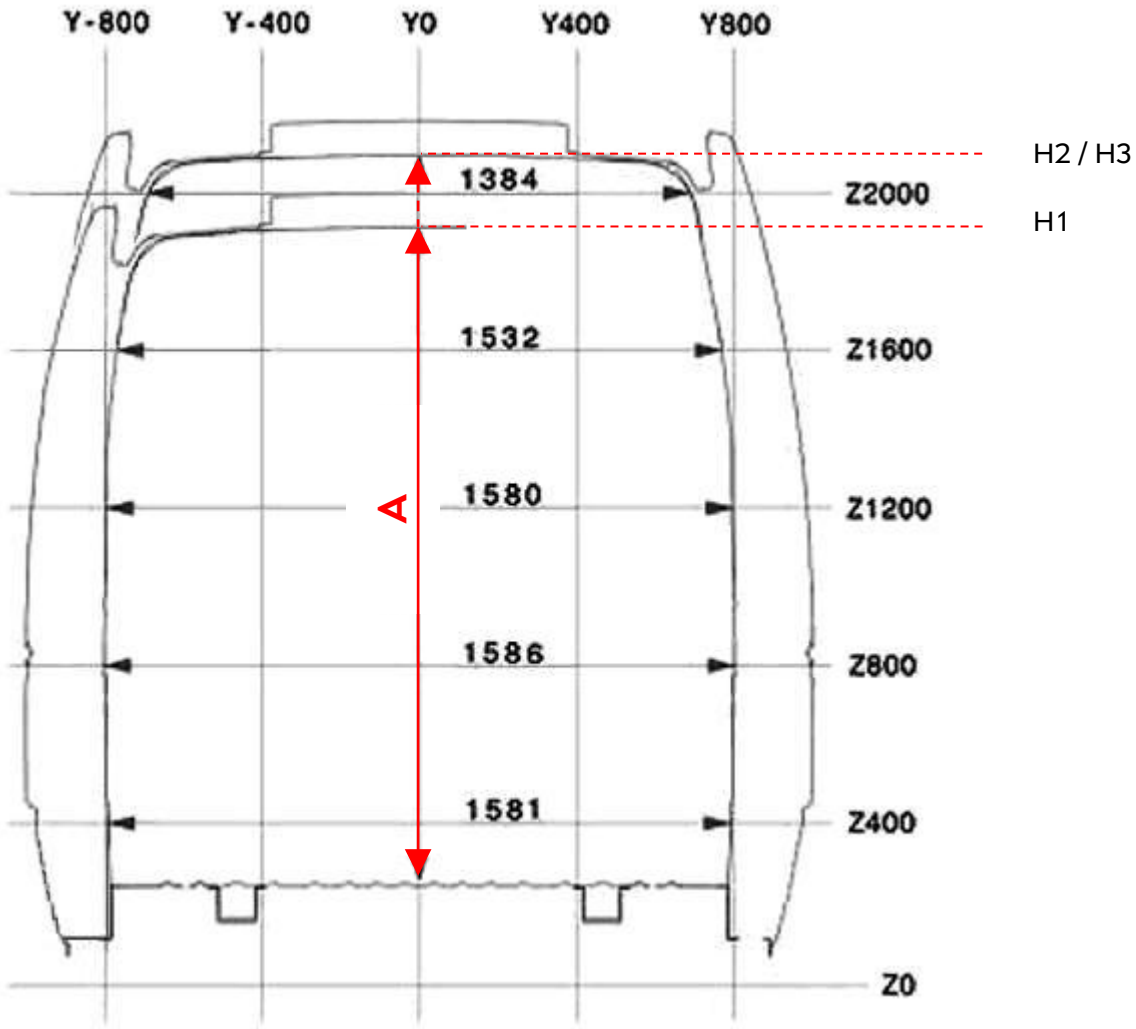
GVW: Gross vehicle weight

FWD: Front wheel drive

RWD: Rear wheel drive

Access to load area via door frame

Access via the rear door frame is provided for 3 heights (H1, H2 and H3) and for traction (FWD or RWD).



A = Maximum height between floor and upper cross member.

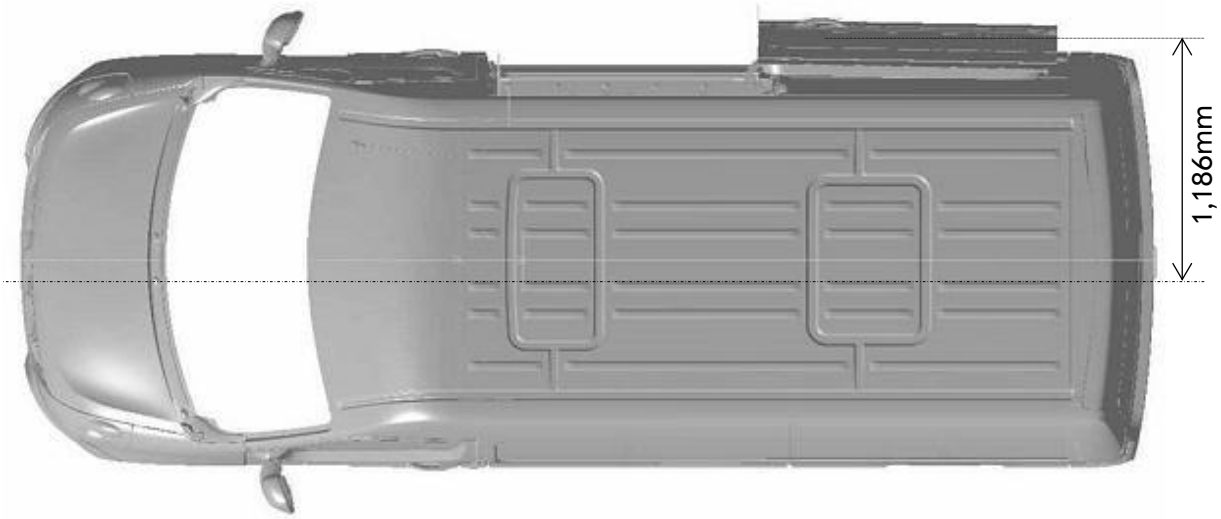
	Panel van H1, FWD	Panel van H2 or H3, FWD	Panel van H2 or H3, RWD
A	1,662	1,847	1,751

Note:

The rear door frame is the same for versions H2 and H3.

2.2.3 SLIDING DOOR DIMENSIONS

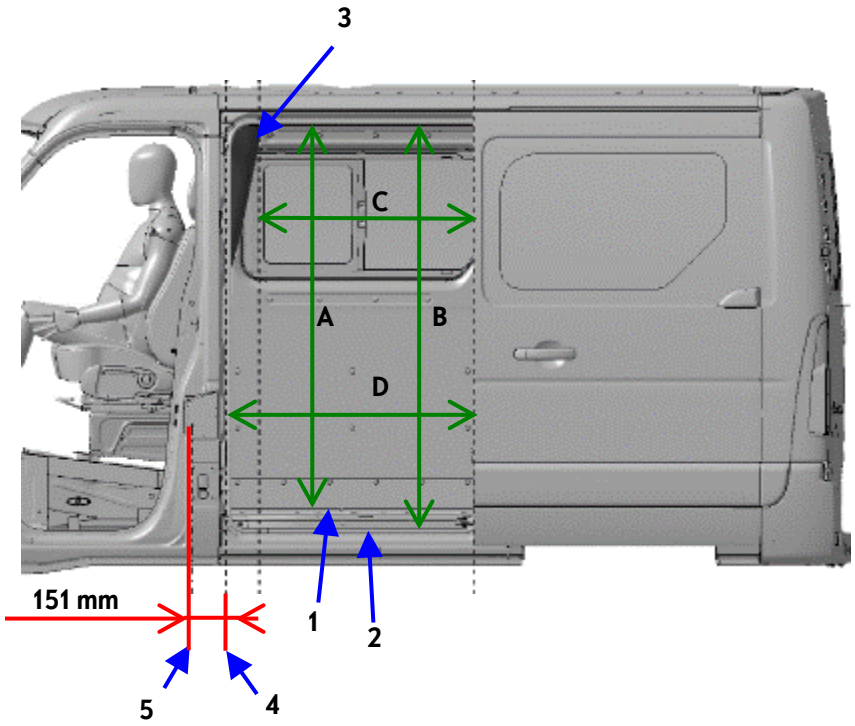
Access via the sliding door, its clearance and its position along the side of the body are given as overall dimensions.



Where a partition is fitted, the diagram below defines the longitudinal travel of the driver's seat. It should be noted that this partition should comply with legislation in the country where the vehicle is marketed.

It is highly recommended, in case of attack or impact from the rear loading area, to add protection to the partition glazing area.

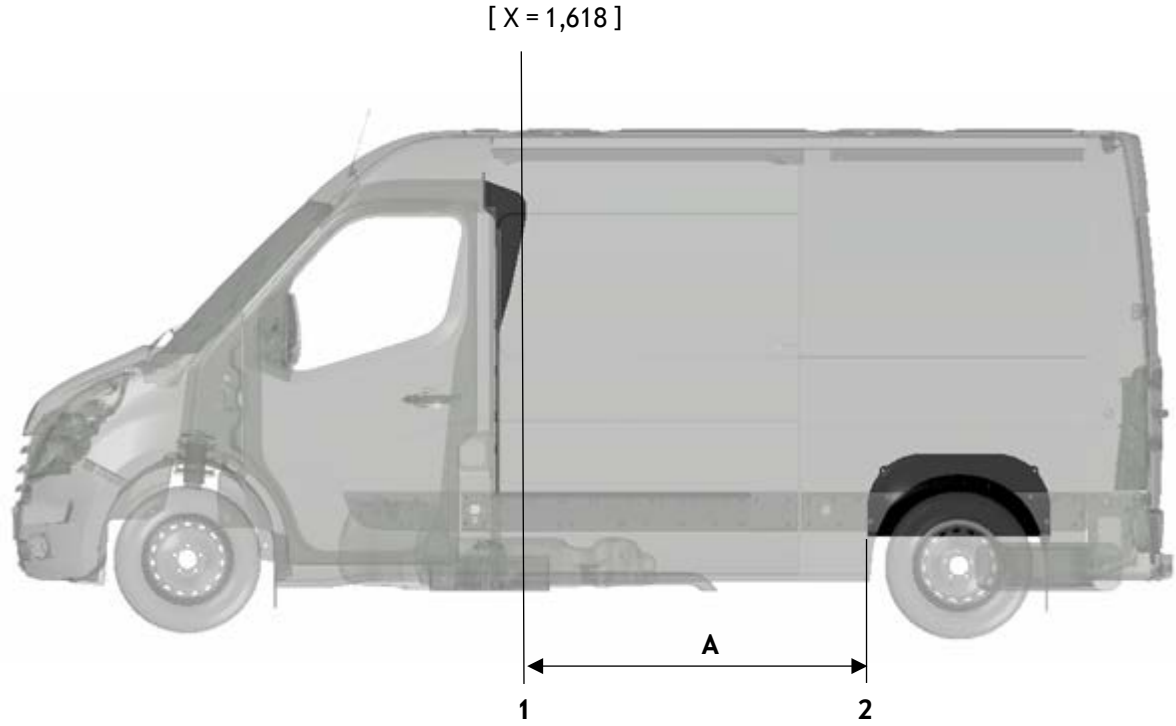
Sliding door opening



Pos.	Description
1	Loading bed
2	Side door entry
3	Solid partition
4	Position of the backrest as far back as possible
5	Rear seat mounting
A	Useful height of sliding door entry
B	Height of sliding door entry above floor
C	Useful width of sliding door entry
D	Width of sliding door entry 1,100mm above the floor

Vehicle type	A (mm)	B (mm)	C (mm)	D (mm)
Panel Van L1H1, Front wheel drive	1,581	1,651	927	1,050
Panel Van L1H2, Front wheel drive	1,780	1,849	927	1,050
Panel Van L2 or L3, Front wheel drive	1,780	1,849	1,147	1,270
Panel Van L3 or L4, Rear wheel drive	1,684	1,849	1,147	1,270

2.2.4 "PIANO" DIMENSIONS



Pos.	Description
1	Solid partition limit
2	Rear wheel arch

Wheelbase (mm)	A (mm)
3,182	1,150
3,682	1,650
4,332	2,300

2.3 WEIGHTS

2.3.1 MAXIMUM AUTHORISED LOAD PER AXLE

The maximum authorized load per axle depends on the version and the gross vehicle weight (GVW).

The values are given in the table (Euro 5 only):

Traction	GVW (kg)	Front axle (kg)	Rear axle (kg)
Front wheel drive	2,800	1,550	1,650
Front wheel drive	3,300	1,650	1,900
Front wheel drive	3,500	1,850	2,100
Single wheel rear drive	3,500	1,850	2,300
Twin wheel rear drive	3,500	1,850	2,800
Twin wheel rear drive	4,500	1,850	3,200

Values for Movano Combi (Euro 6 and after):

Traction	GVW (kg)	Front axle (kg)	Rear axle (kg)
Front wheel drive	3,000	1,850	2,100
Front wheel drive	3,300		
Front wheel drive	3,500		

After vehicle conversion, the weight per axle must be lower than the maximum authorised loads and the vehicle weight must be lower than the maximum authorised laden weight.

Note:

The maximum authorised loads per axle and the gross vehicle weight are shown on the manufacturer's plate.

In order to ensure the directional stability and traction of the vehicle, Opel/ Vauxhall recommends a weight ratio (minimum weight on front axle) / (total converted vehicle weight when laden) in excess of:

- 30% for rear-wheel drive vehicles
- 40% for front-wheel drive vehicles

These conditions can be more restrictive than the maximum regulatory technical axle values in the table above.

For more information on the compliance with the Centre of Gravity position, refer to the chapter 3.1.5.

2.3.2 AXLE WEIGHTS (ON DISPATCH FROM FACTORY): VERSIONS WITHOUT SCR

PANEL VAN (F62) WITHOUT SCR	Min kerb weight options			Kerb weight, all options		
Vehicle variant	Front	Rear	TOTAL	Front	Rear	TOTAL
PRS-E2P2H2 EURO5 D1/D2 3,5t	1,159	1,000	2,159	1,262	1,182	2,444
PRS-E2P2H3 EURO5 D1/D2 3,5t	1,155	993	2,148	1,268	1,210	2,478
PRS-E3P2H2 EURO5 D2+/D3 3,5t	1,256	1,014	2,270	1,341	1,199	2,540
PRS-E3P2H3 EURO5 D2+/D3 3,5t	1,264	1,036	2,300	1,350	1,220	2,570
PRJ-E2P2H2 EURO5 D1/D2 4,5t	1,191	1,097	2,288	1,293	1,277	2,570
PRJ-E2P2H3 EURO5 D1/D2 4,5t	1,195	1,125	2,320	1,301	1,303	2,604
PRJ-E3P2H2 EURO5 D1/D2 4,5t	1,235	1,089	2,324	1,364	1,297	2,661
PRJ-E3P2H3 EURO5 D1/D2 4,5t	1,243	1,123	2,366	1,370	1,333	2,703
TRS-E1P1H1 EURO5 D1/D2 2,8t	1,146	701	1,847	1,257	853	2,110
TRS-E1P1H1 EURO5 D1/D2 3,3t	1,162	685	1,847	1,257	853	2,110
TRS-E1P1H1 EURO5 D1/D2 3,5t	1,146	701	1,847	1,257	853	2,110
TRS-E1P1H2 EURO5 D1/D2 2,8t	1,144	690	1,834	1,252	858	2,110
TRS-E1P1H2 EURO5 D1/D2 3,3t	1,161	678	1,839	1,252	858	2,110
TRS-E1P1H2 EURO5 D1/D2 3,5t	1,151	693	1,844	1,252	858	2,110
TRS-E2P1H3 EURO5 D1/D2 3,3t	1,214	744	1,958	1,333	898	2,231
TRS-E2P1H3 EURO5 D1/D2 3,5t	1,218	750	1,968	1,340	901	2,241
TRS-E3P1H2 EURO5 D1/D2 3,5t	1,237	733	1,970	1,379	901	2,280
TRS-E3P1H3 EURO5 D1/D2 3,5t	1,244	766	2,010	1,375	905	2,280
TRS-E2P1H2 EURO5 D1/D2 3,3t	1,204	723	1,927	1,319	861	2,180
TRS-E2P1H2 EURO5 D1/D2 3,5t	1,204	723	1,927	1,329	871	2,200

PLATFORM CAB WITHOUT SCR	Min. kerb weight options			Kerb weight, all options		
Vehicle variant	Front	Rear	TOTAL	Front	Rear	TOTAL
TRS-E2P1H1 EURO5 D1/D2 3,5t	1,169	409	1,578	1,250	452	1,702
TRS-E2P1H2 EURO5 D1/D2 3,5t	1,180	413	1,592	1,261	455	1,716
TRS-E2'P1H1 EURO5 D1/D2 3,5t	1,183	410	1,593	1,266	452	1,717
TRS-E3P1H1 EURO5 D1/D2 3,5t	1,192	407	1,599	1,277	448	1,725
TRS-E3P1H2 EURO5 D1/D2 3,5t	1,203	410	1,613	1,288	451	1,739

CHASSIS CAB WITHOUT SCR	Min. kerb weight options			Kerb weight, all options		
Vehicle variant	Front	Rear	TOTAL	Front	Rear	TOTAL
PRJ-E2P2 EURO5 D1/D2 4,5t	1,209	766	1,975	1,276	811	2,087
PRJ-E3P2 EURO5 D1/D2 4,5t	1,261	744	2,005	1,331	785	2,117
PRJ-E2P1 prime EURO5 D1/D2 4,5t						
PRS-E2P1 EURO5 D1/D2 3,5t	1,187	648	1,835	1,257	694	1,951
PRS-E3P1 EURO5 D1/D2 3,5t	1,218	642	1,860	1,292	683	1,976
TRS-E2P1 EURO5 D1/D2 3,5t	1,208	478	1,686	1,283	545	1,828
TRS-E2'P1 EURO5 D1/D2 3,5t	1,227	473	1,700	1,304	539	1,843
TRS-E3P1 EURO5 D1/D2 3,5t	1,243	464	1,706	1,321	530	1,851

CREW CAB CHASSIS WITHOUT SCR	Min. kerb weight options			Kerb weight, all options		
Vehicle variant	Front	Rear	TOTAL	Front	Rear	TOTAL
PRJ-E2P2 EURO5 D1/D2 3,5t	1,289	865	2,154	1,356	911	2,267
PRJ-E2P2 EURO5 D1/D2 4,5t	1,289	865	2,154	1,356	911	2,267
PRJ-E3P2 EURO5 D1/D2 3,5t	1,377	846	2,223	1,448	887	2,335
PRJ-E3P2 EURO5 D1/D2 4,5t	1,377	846	2,223	1,448	887	2,335
PRS-E2P1 EURO5 D1/D2 3,5t	1,264	773	2,036	1,334	818	2,152
PRS-E3P1 EURO5 D1/D2 3,5t	1,347	721	2,068	1,421	763	2,184
TRS-E2P1 EURO5 D1/D2 3,5t	1,285	602	1,887	1,360	669	2,029
TRS-E3P1 EURO5 D1/D2 3,5t	1,372	543	1,914	1,450	609	2,059

Glossary:

- TRS: front-wheel drive vehicle
- PRS: rear-wheel drive vehicle with single-wheel
- PRJ: rear-wheel drive vehicle with twin-wheel
- E1 to E3: Wheelbase
  - E1 = 3,182mm
  - E2 = 3,682mm
  - E3 = 4,332mm
- P1 to P2: Rear overhang
  - P1 = short
  - P2 = long
- H1 to H3: Roof height
  - H1 = general
  - H2 = average
  - H3 = high
- D: Motor (1 - 2)
- EURO 5: emissions compliance
- t: Tons (Weight for GVW 2,8 / 3,3 / 3,5 / 4,5t)

2.3.3 AXLE WEIGHTS (ON DISPATCH FROM FACTORY): FOR VERSIONS WITH SCR (Euro 6 b; Euro VI)

Note:

SCR application (Euro 6b and Euro 6) from September 2015 for M1/M2 versions and September 2016 for versions N1/ N2.

The maximum gross vehicle weight and the technical maximum weight of front and rear axle remain unchanged.

PANEL VAN WITH SCR	Min. kerb weight options			Max. kerb weight options		
Vehicle variant	Front	Rear	TOTAL	Front	Rear	TOTAL
FG-PRS-E2P2H2 EURO6 D2+/D3 3,5t	1,232	1,048	2,280	1,302	1,195	2,496
FG-PRS-E2P2H3 EURO6D2+/D3 3,5t	1,228	1,052	2,280	1,308	1,223	2,530
FG-PRS-E3P2H2 EURO6 D2+/D3 3,5t	1,298	1,025	2,323	1,383	1,210	2,592
FG-PRS-E3P2H3 EURO6 D2+/D3 3,5t	1,306	1,048	2,354	1,392	1,231	2,622
FG-PRJ-E2P2H2 EURO VI D2+/D3 3,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1,231	1,111	2,342	1,333	1,290	2,622
FG-PRJ-E2P2H2 EURO VI D2+/D3 3,5t SSADPL ou PNLGT,PNLDT	1,226	1,074	2,300	1,314	1,224	2,537
FG-PRJ-E2P2H3 EURO VI D2+/D3 3,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1,235	1,139	2,374	1,341	1,316	2,656
FG-PRJ-E2P2H3 EURO VI D2+/D3 3,5t SSADPL ou PNLGT,PNLDT	1,231	1,102	2,333	1,318	1,245	2,562
FG-PRJ-E2P2H2 EURO VI D2+/D3 4,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1,231	1,111	2,342	1,333	1,290	2,622
FG-PRJ-E2P2H2 EURO VI D2+/D3 4,5t SSADPL ou PNLGT,PNLDT	1,226	1,074	2,300	1,314	1,224	2,537
FG-PRJ-E2P2H3 EURO VI D2+/D3 4,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1,235	1,139	2,374	1,341	1,316	2,656
FG-PRJ-E2P2H3 EURO VI D2+/D3 4,5t SSADPL ou PNLGT,PNLDT	1,231	1,102	2,333	1,318	1,246	2,564
FG-PRJ-E3P2H2 EURO 6 / VI D2+/D3 3,5t	1,277	1,101	2,378	1,406	1,308	2,713
FG-PRJ-E3P2H3 EURO 6/ VI D2+/D3 3,5t	1,285	1,135	2,420	1,412	1,339	2,750
FG-PRJ-E3P2H2 EURO 6 / VI D2+/D3 4,5t	1,277	1,101	2,378	1,406	1,308	2,713
FG-PRJ-E3P2H3 EURO 6/ VI D2+/D3 4,5t	1,285	1,135	2,420	1,412	1,344	2,755
FG-TRS-E1P1H1 EURO 6/VI D2+/D3 2,8t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT-	1,185	717	1,902	1,295	868	2,162
FG-TRS-E1P1H1 EURO 6/VI D1/D2 2,8t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT-	1,176	717	1,893	1,286	868	2,153
FG-TRS-E1P1H1 EURO 6/VI D2+/D3 2,8t SSADPL ou PNLGT,PNLDT-	1,173	688	1,861	1,251	802	2,052
FG-TRS-E1P1H1 EURO 6/VI D1/D2 2,8t SSADPL ou PNLGT,PNLDT-	1,164	688	1,852	1,242	802	2,043

PANEL VAN WITH SCR	Min. kerb weight options			Max. kerb weight options		
Vehicle variant	Front	Rear	TOTAL	Front	Rear	TOTAL
FG-TRS-E1P1H1 EURO6 / VI D2+/D3 3,3t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT-	1,185	717	1,902	1,295	868	2,162
FG-TRS-E1P1H1 EURO6 / VI D1/D2 3,3t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT-	1,185	717	1,902	1,295	868	2,162
FG-TRS-E1P1H1 EURO6 / VI D2+/D3 3,3t SSADPL ou PNLGT,PNLDT-	1,196	670	1,866	1,251	802	2,052
FG-TRS-E1P1H1 EURO6 / VI D1/D2 3,3t SSADPL ou PNLGT,PNLDT-	1,187	670	1,857	1,242	802	2,043
FG-TRS-E1P1H1 EURO6 / VI D2+/D3 3,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1,185	717	1,902	1,295	868	2,162
FG-TRS-E1P1H1 EURO6 / VI D1/D2 3,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1,176	717	1,893	1,286	868	2,153
FG-TRS-E1P1H1 EURO6 / VI D2+/D3 3,5t SSADPL ou PNLGT,PNLDT-	1,190	681	1,871	1,252	801	2,052
FG-TRS-E1P1H1 EURO6 / VI D1/D2 3,5t SSADPL ou PNLGT,PNLDT-	1,181	681	1,862	1,243	801	2,043
FG-TRS-E1P1H2 EURO6 / VI D2+/D3 2,8t	1,183	706	1,889	1,290	873	2,162
FG-TRS-E1P1H2 EURO6 / VI D1/D2 2,8t	1,174	706	1,880	1,281	873	2,153
FG-TRS-E1P1H2 EURO6 / VI D2+/D3 3,3t	1,200	694	1,894	1,290	873	2,162
FG-TRS-E1P1H2 EURO6 / VI D1/D2 3,3t	1,191	694	1,885	1,281	873	2,153
FG-TRS-E1P1H2 EURO6 / VI D1/D2 3,5tbi turbo	1,190	709	1,899	1,290	873	2,162
FG-TRS-E1P1H2 EURO6 / VI D1/D2 3,5t	1,181	709	1,890	1,281	873	2,153
FG-TRS-E2P1H2 EURO 6 / VI D2+/D3 3,3t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1,244	736	1,980	1,350	893	2,242
FG-TRS-E2P1H2 EURO 6 D1/D2 3,3t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1,235	736	1,971	1,341	893	2,233
FG-TRS-E2P1H2 EURO 6 / VI D2+/D3 3,3t SSADPL ou PNLGT,PNLDT	1,234	704	1,938	1,315	838	2,152
FG-TRS-E2P1H2 EURO 6 D1/D2 3,3t SSADPL ou PNLGT,PNLDT	1,225	704	1,929	1,306	838	2,143
FG-TRS-E2P1H2 EURO 6 / VI D2+/D3 3,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1,244	736	1,980	1,355	898	2,252
FG-TRS-E2P1H2 EURO 6 D1/D2 3,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1,235	736	1,971	1,345.5	897.5	2,243
FG-TRS-E2P1H2 EURO 6 / VI D2+/D3 3,5t SSADPL ou PNLGT,PNLDT	1,236	707	1,943	1,320	843	2,162
FG-TRS-E2P1H2 EURO 6 D1/D2 3,5t SSADPL ou PNLGT,PNLDT	1,227	707	1,934	1,311	843	2,153
FG-TRS-E2P1H3 EURO 6 / VI D2+/D3 3,3t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1,254	757	2,011	1,371	909	2,280
FG-TRS-E2P1H3 EURO 6 D1/D2 3,3t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1,245	757	2,002	1,364	911	2,275
FG-TRS-E2P1H3 EURO 6 / VI D2+/D3 3,3t SSADPL ou PNLGT,PNLDT	1,246	728	1,974	1,323	840	2,162
FG-TRS-E2P1H3 EURO 6 D1/D2 3,3t SSADPL ou PNLGT,PNLDT	1,237	728	1,965	1,314	840	2,153

PANEL VAN WITH SCR	Min. kerb weight options			Max. kerb weight options		
Vehicle variant	Front	Rear	TOTAL	Front	Rear	TOTAL
FG-TRS-E2P1H3 EURO 6 / VI D2+/D3 3,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1,258	763	2,021	1,375	905	2,280
FG-TRS-E2P1H3 EURO 6 D1/D2 3,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1,249	763	2,012	1,370	910	2,280
FG-TRS-E2P1H3 EURO 6 / VI D2+/D3 3,5t SSADPL ou PNLGT,PNLDT	1,250	734	1,984	1,352	862	2,213
FG-TRS-E2P1H3 EURO 6 D1/D2 3,5t SSADPL ou PNLGT,PNLDT	1,241	734	1,975	1,343	862	2,204
FG-TRS-E3P1H2 EURO 6 / VI D2+/D3 3,5t	1,279	745	2,024	1,421	912	2,332
FG-TRS-E3P1H2 EURO6 D2- 3,5t	1,270	745	2,015	1,412	912	2,323
FG-TRS-E3P1H3 EURO 6 / VI D2+/D3 3,5t	1,286	778	2,064	1,417	916	2,332
FG-TRS-E3P1H3 EURO 6 D2- 3,5t	1,277	778	2,055	1,408	916	2,323

PLATFORM CAB WITH SCR	Min. kerb weight options			Max. kerb weight options		
Vehicle variant	Front	Rear	TOTAL	Front	Rear	TOTAL
TRS-E1P1 EURO6 D2+/D3	1,184	439	1,623	1,263	484	1,746
TRS-E1P1 EURO6 D1/D2	1,175	439	1,614	1,254	484	1,737
TRS-E1P1 EUROVI D2+/D3	1,184	439	1,623	1,263	484	1,746
TRS-E1P1 EURO VI D1/D2	1,175	439	1,614	1,254	484	1,737
TRS-E2P1H1 EURO6 D2+/D3	1,209	422	1,631	1,285	484	1,769
TRS-E2P1H1 EURO6 D1 / D2	1,200	422	1,622	1,276	484	1,760
TRS-E2P1H2 EURO VI D2+/D3	1,219	426	1,645	1,295	484	1,779
TRS-E2P1H2 EUROVI D1 / D2	1,210	426	1,636	1,286	484	1,770
TRS-E25P1H1 EURO6 D2+/D3	1,229	416	1,645	1,287	488	1,774
TRS-E25P1H1 EURO6 D1/D2	1,220	416	1,636	1,278	488	1,765
TRS-E25P1H2 EURO6 D2+/D3	1,243	418	1,661	1,310	490	1,799
TRS-E25P1H2 EURO6 D1 / D2	1,234	418	1,652	1,301	490	1,790
TRS-E25P1H1 EURO VI D2+/D3	1,229	416	1,645	1,287	488	1,774
TRS-E25P1H1 EURO VI D1/D2	1,220	416	1,636	1,278	488	1,765
TRS-E25P1H2 EURO VI D2+/D3	1,243	418	1,661	1,310	490	1,799
TRS-E25P1H2 EURO VI D1 / D2	1,234	418	1,652	1,301	490	1,790
TRS-E3P1H1 EURO6 D2+/D3	1,234	419	1,653	1,292	491	1,783
TRS-E3P1H1 EURO6 D1/D2	1,225	419	1,644	1,283	491	1,773
TRS-E3P1H2 EURO6 D2+/D3	1,247	422	1,669	1,314	494	1,807
TRS-E3P1H2 EURO6 D1 / D2	1,238	422	1,660	1,305	494	1,798
TRS-E3P1H1 EURO VI D2+/D3	1,234	419	1,653	1,292	491	1,783
TRS-E3P1H1 EURO VI D1/D2	1,225	419	1,644	1,283	491	1,773
TRS-E3P1H2 EURO VI D2+/D3	1,247	422	1,669	1,314	494	1,807
TRS-E3P1H2 EURO VI D1 / D2	1,238	422	1,660	1,305	494	1,798

CHASSIS CAB WITH SCR	Min. kerb weight options			Max. kerb weight options		
Vehicle variant	Front	Rear	TOTAL	Front	Rear	TOTAL
PRS-E3P1 EURO VI D2-/D2+/D3	1,292	612	1,904	1,339	689	2,028
PRJ-E2P2 EURO VI D1/D2-/D2+/D3 3,5t	1,248	780	2,029	1,315	823	2,137
PRJ-E2P2 EURO VI D1/D2-/D2+/D3 4,5t	1,244	776	2,021	1,311	819	2,129
PRJ-E3P2 EURO VI D2-/D2+/D3 3,5t	1,302	756	2,058	1,315	823	2,137
PRJ-E3P2 EURO VI D1/D2-/D2+/D3 4,5t	1,302	756	2,058	1,311	819	2,129
PRS-E2P1 EURO VI /D2-/D2+/D3	1,230	623	1,853	1,306	697	2,003
PRJ-E2P1 EURO VI D2-/D2+/D3 2,5t	1,244	776	2,021	1,311	819	2,129
PRJ-E2P1 EURO VI D2-/D2+/D3 3,5t	1,244	776	2,021	1,311	819	2,129
TRS-E2P1 EURO6 D2+/D3	1,245	473	1,718	1,298	585	1,882
TRS-E2P1 EURO6 D1 / D2	1,236	473	1,709	1,289	585	1,873
TRS-E2P1 EURO VI D2+/D3	1,245	473	1,718	1,298	585	1,882
TRS-E2P1 EURO VI D1 / D2	1,236	473	1,709	1,289	585	1,873
TRS-E25P1 EURO6 D2+/D3	1,273	463	1,736	1,318	576	1,894
TRS-E25P1 EURO6 D1 / D2	1,236	473	1,709	1,289	585	1,873
TRS-E25P1 EURO VI D2+/D3	1,273	463	1,736	1,318	576	1,894
TRS-E25P1 EURO VI D1 / D2	1,236	473	1,709	1,289	585	1,873
TRS-E3P1 EURO6 D2+/D3	1,277	467	1,744	1,322	580	1,902
TRS-E3P1 EURO6 D1 / D2	1,268	467	1,735	1,313	580	1,893
TRS-E3P1 EURO VI D2+/D3	1,277	467	1,744	1,322	580	1,902
TRS-E3P1 EURO VI D1 / D2	1,268	467	1,735	1,313	580	1,893

CREW CAB CHASSIS WITH SCR	Min. kerb weight options			Max. kerb weight options		
Vehicle variant	Front	Rear	TOTAL	Front	Rear	TOTAL
TRS-E2P1 Euro6 D2+/D3 biTurbo	1,309	615	1,925	1,389	681	2,071
TRS-E2P1 Euro6 D1/D2	1,300	615	1,916	1,380	681	2,062
TRS-E2P1 EuroVI D2+/D3	1,309	615	1,925	1,389	681	2,071
TRS-E2P1 EuroVI D1/D2	1,300	615	1,916	1,380	681	2,062
TRS-E3P1 Euro6 D2+/D3 biTurbo	1,413	555	1,968	1,490	619	2,109
TRS-E3P1 Euro6 D1/D2	1,404	555	1,959	1,482	619	2,102
TRS-E3P1 EuroVI D2+/D3 biTurbo	1,413	555	1,968	1,490	619	2,109
TRS-E3P1 EuroVI D1/D2	1,404	555	1,959	1,482	619	2,102
PRS-E2P1 EuroVI D2/ D2+/D3	1,303	786	2,089	1,373	831	2,204
PRS-E3P1 EuroVI D2/ D2+/D3	1,389	733	2,122	1,463	773	2,236
PRJ-E2P2 EuroVI D2/ D2+/D3 3,5t	1,329	879	2,208	1,396	923	2,319
PRJ-E2P2 EuroVI D2/ D2+/D3 4,5t	1,329	879	2,208	1,396	923	2,319
PRJ-E3P2 EuroVI D2/ D2+/D3 3,5t	1,419	858	2,277	1,490	898	2,387
PRJ-E3P2 EuroVI D2/ D2+/D3 4,5t	1,419	858	2,277	1,490	898	2,387

Glossary:

- TRS: front-wheel drive vehicle
- PRS: rear-wheel drive vehicle with single-wheel
- PRJ: rear-wheel drive vehicle with twin-wheel
- E1 to E3: Wheelbase
  - E1 = 3,182mm
  - E2 = 3,682mm
  - E3 = 4,332mm
- P1 to P2: Rear overhang
  - P1 = short
  - P2 = long
- H1 to H3: Roof height
  - H1 = general
  - H2 = average
  - H3 = high
- D: Engine (1 - 3)
- EURO 5: emissions compliance
- t: Tons (Weight for GVW 2,8 / 3,3 / 3,5 / 4,5t)

- SUSPN1 = Pneumatic Suspension [F47]
- SSADPL = Without Wooden Floor
- PLCBOR = Resin Coated Wooden Floor [B68]
- PNLGT = LH Panel Unglazed [BTC]
- PNLDT = RH Panel Unglazed [BTB]
- ou = or
- sauf = except

2.3.4 WEIGHTS OF OPTIONS

The following tables show weights (dispersion on front and rear axle) for various options depending on wheelbase

- Panel van
- Chassis cab
- Chassis crew cab
- Combi
- Platform cab

	PANEL VAN																	
	FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			SINGLE WHEEL REAR DRIVE			TWIN WHEEL REAR DRIVE			TWIN WHEEL REAR DRIVE		
Wheelbase	E1 = 3182			E2 = 3682			E3 = 4332			E2 = 3682			E2 = 3682			E3 = 4332		
	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Driver's seat - Arm rest	1,0	0,5	1,6	1,1	0,4	1,6	1,2	0,4	1,6	1,1	0,4	1,6	1,1	0,4	1,6	1,2	0,4	1,6
Seats - Fixed shelf bench seat on 1/2 bench seat back rest instead of fixed bench seat	0,7	0,5	1,2	0,8	0,4	1,2	0,8	0,4	1,2	0,8	0,4	1,2	0,8	0,4	1,2	0,8	0,4	1,2
Storage - Roof rack	1,4	0,5	1,9	1,5	0,4	1,9	1,6	0,4	1,9	1,5	0,4	1,9	1,5	0,4	1,9	1,6	0,4	1,9
Panel partition instead of no partition	13,2	11,7	24,9	14,8	10,1	24,9	16,3	8,6	24,9	14,8	10,1	24,9	16,3	11,2	27,5	18,0	9,5	27,5
Wheels - Bolt cover instead of wheel centre cover	0,4	0,4	0,7	0,4	0,4	0,7	0,4	0,4	0,7	0,4	0,4	0,7						
Seats - Lumbar adjustment	0,1	0,1	0,2	0,1	0,0	0,2	0,1	0,0	0,2	0,1	0,0	0,2	0,1	0,0	0,2	0,1	0,0	0,2
Seats - Rotating shelf bench seat on 1/2 bench seat back rest, storage tray under bench seat and tilting seat cushion instead of fixed shelf bench seat on 1/2 bench seat back rest	5,4	3,0	8,4	5,8	2,6	8,4	6,2	2,2	8,4	5,8	2,6	8,4	5,8	2,6	8,4	6,2	2,2	8,4
Wheels - Integral covers instead of bolt covers	0,7	0,7	1,5	0,7	0,7	1,5	0,7	0,7	1,5	0,7	0,7	1,5						
Dashboard: upper storage and 1 DIN collapsible shelf	1,2	0,8	2,0	1,3	0,7	2,0	1,4	0,6	2,0	1,3	0,7	2,0	1,3	0,7	2,0	1,4	0,6	2,0
Front side airbag (driver)	0,6	0,3	0,9	0,6	0,3	0,9	0,7	0,2	0,9	0,6	0,3	0,9	0,6	0,3	0,9	0,7	0,2	0,9
Front side airbag (passenger) - not compatible with bench seat	0,6	0,3	0,9	0,6	0,3	0,9	0,7	0,2	0,9	0,6	0,3	0,9	0,6	0,3	0,9	0,7	0,2	0,9
Passenger airbag	1,5	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7
Trailer tow bar	-6,4	31,4	25,0	-5,5	30,6	25,0	-4,7	29,7	25,0	-10,3	36,5	26,1	-10,3	36,5	26,1	-4,6	30,7	26,1
Mud flaps (FR + RR)	0,7	0,7	1,4	0,7	0,7	1,4	0,7	0,7	1,4	0,7	0,7	1,4	1,0	1,0	1,9	1,0	1,0	1,9
Robotised gearbox (available on 125 bhp and150 bhp FWD)	6,8	-0,4	6,4	6,7	-0,3	6,4	6,7	-0,3	6,4	7,9	1,1	9,0	7,9	1,1	9,0	8,0	0,9	9,0
Manual AC	18,0	-2,1	15,9	17,7	-1,8	15,9	17,4	-1,5	15,9	17,7	-1,8	15,9	17,7	-1,8	15,9	17,4	-1,5	15,9

	PANEL VAN																	
	FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			SINGLE WHEEL REAR DRIVE			TWIN WHEEL REAR DRIVE			TWIN WHEEL REAR DRIVE		
Wheelbase	E1 = 3182			E2 = 3682			E3 = 4332			E2 = 3682			E2 = 3682			E3 = 4332		
	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Regulated AC	18,5	-2,2	16,3	18,2	-1,9	16,3	17,9	-1,6	16,3	18,2	-1,9	16,3	18,2	-1,9	16,3	17,9	-1,6	16,3
Semi-glazed body 1 fixed window sliding side door instead of metal body 1 metal sliding side door	2,8	4,6	7,4	3,8	4,3	8,1	5,0	3,1	8,1	4,3	3,9	8,1	4,3	3,9	8,1	5,1	3,0	8,1
Semi-glazed body 2 fixed window sliding side door instead of metal body 1 metal sliding side door	12,4	22,8	35,2	18,1	21,5	39,6	24,2	15,4	39,6	20,9	19,0	39,9	20,9	19,0	39,9	25,3	15,0	40,3
Glazed body 1 fixed window sliding side door instead of metal body 1 metal sliding side door	1,1	11,4	12,5	2,8	10,5	13,4	5,0	10,4	15,4	0,9	16,3	17,3	0,9	16,3	17,3	4,5	17,6	22,1
Glazed body 2 fixed window sliding side door instead of metal body 1 metal sliding side door	10,3	28,7	38,9	15,5	29,6	45,2	24,2	24,3	48,4	16,9	31,7	48,5	16,9	31,7	48,5	23,6	28,6	52,2
Glass partition instead of panel partition	0,8	0,7	1,5	0,9	0,6	1,5	1,0	0,5	1,5	0,9	0,6	1,5	0,9	0,6	1,5	1,0	0,5	1,5
Locking - Hands Free Access (involves 2-button key)	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3
Trajectory control - ESP + ASR	0,5	0,0	0,5	0,5	0,0	0,5	0,5	0,0	0,5									
Tachograph	1,0	0,4	1,4	1,0	0,3	1,4	1,1	0,3	1,4	1,0	0,3	1,4	1,0	0,3	1,4	1,1	0,3	1,4
Puncture - Puncture kit (no spare wheel - jack and crank maintained)	5,7	-31,3	-25,6	5,2	-30,9	-25,6	4,8	-30,5	-25,6	9,5	-37,4	-27,8	8,4	-33,0	-24,6	7,5	-32,1	-24,6
Grilled half partition instead of no partition	6,0	4,9	10,9	6,7	4,2	10,9	7,3	3,6	10,9	6,7	4,2	10,9	6,7	4,2	10,9	7,3	3,6	10,9
Complete wood trim	0,3	15,4	15,7	0,9	18,2	19,1	2,8	18,3	21,1									
Half-height wood trim	0,8	2,3	3,1	1,1	2,6	3,7	2,3	2,4	4,7	0,7	3,2	3,9	0,7	3,2	3,9	1,0	3,6	4,6

	PANEL VAN																	
	FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			SINGLE WHEEL REAR DRIVE			TWIN WHEEL REAR DRIVE			TWIN WHEEL REAR DRIVE		
Wheelbase	E1 = 3182			E2 = 3682			E3 = 4332			E2 = 3682			E2 = 3682			E3 = 4332		
	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Trim for panel partition	1,3	1,2	2,5	1,5	1,0	2,5	1,6	0,9	2,5	1,5	1,0	2,5	1,5	1,0	2,5	1,6	0,9	2,5
Trim for glass partition	1,3	1,1	2,4	1,4	1,0	2,4	1,6	0,8	2,4	1,4	1,0	2,4	1,4	1,0	2,4	1,6	0,8	2,4
RR running board (FWD) - option on Panel vans, Combis and Buses	-0,4	10,9	10,5	-0,3	10,8	10,5	-0,3	10,8	10,5									
NFA navigation (involves R1 or R2+C BOX radios)	2,1	0,4	2,5	2,1	0,3	2,5	2,2	0,3	2,5	2,1	0,3	2,5	2,1	0,3	2,5	2,2	0,3	2,5
Wooden floor (all types for conso 3 variant)	5,1	25,7	30,8	8,0	29,5	37,5	10,8	35,4	46,2	5,5	37,5	43,0	4,0	37,1	41,1	8,1	41,7	49,8
Right-hand sheet-metal sliding side door instead of no sliding side door	11,4	18,3	29,7	14,8	16,4	31,2	18,7	12,5	31,2	17,6	14,0	31,6	17,6	14,0	31,6	21,3	10,6	32,0
Right-hand glass sliding side door instead of no sliding side door	14,2	22,8	37,0	19,5	21,5	41,0	24,6	16,4	41,0	22,9	18,1	41,0	22,9	18,1	41,0	27,3	13,7	41,0
Right-hand glass sliding side door instead of no sliding side door	12,6	20,2	32,8	16,9	18,7	35,6	21,4	14,2	35,6	19,9	15,7	35,6	19,9		35,6	23,7	11,9	35,6
Left-hand sheet-metal sliding side door instead of no sliding side door	11,4	18,3	29,7	14,8	16,4	31,2	18,7	12,5	31,2	17,6	14,0	31,6	17,6	14,0	31,6	21,3	10,6	32,0
Left-hand glass sliding side door instead of no sliding side door	14,2	22,8	37,0	19,5	21,5	41,0	24,6	16,4	41,0	22,9	18,1	41,0	22,9	18,1	41,0	27,3	13,7	41,0
Left-hand sliding side door with fixed window instead of no sliding side door	12,6	20,2	32,8	16,9	18,7	35,6	21,4	14,2	35,6	19,9	15,7	35,6	19,9	15,7	35,6	23,7	11,9	35,6
Trunk lids 270° instead of 180°				-0,2	0,7	0,5	-0,2	0,7	0,5	-0,2	0,7	0,5	-0,2	0,7	0,5	-0,2	0,7	0,5
Glazed trunk lids	-1,4	5,9	4,5	-1,2	5,7	4,5	-1,0	5,5	4,5	-2,0	6,5	4,5	-2,0	6,5	4,5	-1,7	6,2	4,5
Power take-off instead of none (FWD and RWD, incompatible with CA)	0,2	0,0	0,2	0,2	0,0	0,2	0,2	0,0	0,2	0,2	0,0	0,2	0,2	0,0	0,2	0,2	0,0	0,2
Power take-off on gearbox										6,8	0,7	7,5	6,8	0,7	7,5	6,9	0,6	7,5
Mp3 CD radio with remote display and RCA (R1-08 v2)	1,4	0,3	1,7	1,4	0,2	1,7	1,5	0,2	1,7	1,4	0,2	1,7	1,4	0,2	1,7	1,5	0,2	1,7

	PANEL VAN																	
	FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			SINGLE WHEEL REAR DRIVE			TWIN WHEEL REAR DRIVE			TWIN WHEEL REAR DRIVE		
Wheelbase	E1 = 3182			E2 = 3682			E3 = 4332			E2 = 3682			E2 = 3682			E3 = 4332		
	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Bluetooth mp3 CD radio (R2-08 v2)	1,4	0,3	1,7	1,4	0,2	1,7	1,5	0,2	1,7	1,4	0,2	1,7	1,4	0,2	1,7	1,5	0,2	1,7
Radio tuner only, with in jack line on fascia (R0-07)	1,4	0,3	1,7	1,4	0,2	1,7	1,5	0,2	1,7	1,4	0,2	1,7	1,4	0,2	1,7	1,5	0,2	1,7
100l instead of 80l tank	10,1	7,6	17,7	11,1	6,6	17,7	12,1	5,6	17,7	11,1	6,6	17,7	11,1	6,6	17,7	12,1	5,6	17,7
16 aluminium wheels instead of steel wheels (FWD only)	-0,9	-0,9	-1,8	-0,9	-0,9	-1,8	-0,9	-0,9	-1,8									
No RR running board (RWD)										5,3	-17,7	-12,4	5,3	-17,7	-12,4	4,5	-16,9	-12,4
Underslung driver's seat instead of driver's seat - Arm rest	16,1	7,3	23,4	17,1	6,3	23,4	18,1	5,4	23,4	17,1	6,3	23,4	17,1	6,3	23,4	18,1	5,4	23,4
Heated seat	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3
Individual passenger seats instead of fixed shelf bench seat on 1/2 bench seat back rest	-1,1	-2,1	-3,2	-1,4	-1,8	-3,2	-1,6	-1,5	-3,2	-1,4	-1,8	-3,2	-1,4	-1,8	-3,2	-1,6	-1,5	-3,2
Pneumatic Suspension (FWD only)	-0,4	45,0	44,6	-4,0	48,6	44,6	-3,0	47,6	44,6									

	CHASSIS CAB																	
	FRONT WHEEL DRIVE			REAR WHEEL DRIVE			FRONT WHEEL DRIVE			REAR WHEEL DRIVE			TWIN WHEEL REAR DRIVE			TWIN WHEEL REAR DRIVE		
Wheelbase	E2 =3682 mm			E2 =3682 mm			E3 =4332 mm			E3 =4332 mm			E2 =3682 mm			E3 =4332 mm		
	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Driver's seat - Arm rest	1,1	0,4	1,6	1,1	0,4	1,6	1,2	0,4	1,6	1,2	0,4	1,6	1,1	0,4	1,6	1,2	0,4	1,6
Seats - Fixed shelf bench seat on 1/2 bench seat back rest instead of fixed bench seat	0,8	0,4	1,2	0,8	0,4	1,2	0,8	0,4	1,2	0,8	0,4	1,2	0,8	0,4	1,2	0,8	0,4	1,2
Storage - Roof rack	1,5	0,4	1,9	1,5	0,4	1,9	1,5	0,4	1,9	1,5	0,4	1,9	1,5	0,4	1,9	1,5	0,4	1,9
Wheel – bolt cover small	0,4	0,4	0,7	0,4	0,4	0,7	0,4	0,4	0,7	0,4	0,4	0,7	0,4	0,4	0,7	0,4	0,4	0,7
Wheel – bolt cover big	0,8	0,6	1,5	0,8	0,6	1,5	0,9	0,5	1,5	0,9	0,5	1,5						
Seats - Lumbar adjustment	0,1	0,0	0,2	0,1	0,0	0,2	0,1	0,0	0,2	0,1	0,0	0,2	0,1	0,0	0,2	0,1	0,0	0,2
Seats - Rotating shelf bench seat on 1/2 bench seat back rest, storage tray under bench seat and tilting seat cushion instead of fixed shelf bench seat on 1/2 bench seat back rest	5,8	2,6	8,4	5,8	2,6	8,4	6,2	2,2	8,4	6,2	2,2	8,4	5,8	2,6	8,4	6,2	2,2	8,4
Dashboard: upper storage and 1 DIN collapsible shelf	1,8	0,2	2,0	1,8	0,2	2,0	1,8	0,2	2,0	1,8	0,2	2,0	1,8	0,2	2,0	1,8	0,2	2,0
Front side airbag (driver)	0,5	0,4	0,9	0,5	0,4	0,9	0,6	0,3	0,9	0,6	0,3	0,9	0,5	0,4	0,9	0,6	0,3	0,9
Front side airbag (passenger) - not compatible with bench seat	0,8	0,1	0,9	0,8	0,1	0,9	0,7	0,2	0,9	0,7	0,2	0,9	0,8	0,1	0,9	0,8	0,1	0,9
Passenger airbag	1,5	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7
Trailer tow bar	-6,6	29,7	23,1	-6,6	29,7	23,1	-5,6	28,7	23,1	-5,6	28,7	23,1	-9,7	32,1	22,4	-8,3	30,7	22,4
Robotised gearbox (only available on 125 bhp and150 bhp)	7,0	-0,5	6,4	7,9	1,1	9,0	6,9	-0,4	6,4	8,0	0,9	9,0	7,9	1,1	9,0	8,0	0,9	9,0
Regulated AC	18,1	-1,8	16,3	18,1	-1,8	16,3	17,9	-1,5	16,3	17,9	-1,5	16,3	18,1	-1,8	16,3	17,9	-1,5	16,3
Locking - Hands Free Access (involves 2-button key)	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3
Trajectory control - ESP + ASR	0,5	0,0	0,5				0,5	0,0	0,5									

Note: Subject to errors and technical amendments. The electronic version of the guidelines is the decisive source of up-to-date data on body guidelines (online body guidelines). Data status August 2018

	CHASSIS CAB																	
	FRONT WHEEL DRIVE			REAR WHEEL DRIVE			FRONT WHEEL DRIVE			REAR WHEEL DRIVE			TWIN WHEEL REAR DRIVE			TWIN WHEEL REAR DRIVE		
Wheelbase	E2 =3682 mm			E2 =3682 mm			E3 =4332 mm			E3 =4332 mm			E2 =3682 mm			E3 =4332 mm		
	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Tachograph	1,0	0,3	1,4	1,0	0,3	1,4	1,1	0,3	1,4	1,1	0,3	1,4	1,0	0,3	1,4	1,1	0,3	1,4
Puncture - Puncture kit (no spare wheel - jack and crank maintained)	5,2	-30,9	-25,6	5,2	-30,9	-25,6	4,8	-30,5	-25,6	4,8	-30,5	-25,6	8,4	-33,0	-24,6	7,5	-32,1	-24,6
Trim for glazed partition	1,5	1,0	2,6	1,5	1,0	2,6	1,7	0,9	2,6	1,7	0,9	2,6	1,5	1,0	2,6	1,7	0,9	2,6
NFA navigation (involves R1 or R2+C BOX radios)	2,1	0,3	2,5	2,1	0,3	2,5	2,2	0,3	2,5	2,2	0,3	2,5	2,1	0,3	2,5	2,2	0,3	2,5
Power take-off instead of none (FWD and RWD, incompatible with AC)	0,2	0,0	0,2	0,2	0,0	0,2	0,2	0,0	0,2	0,2	0,0	0,2	0,2	0,0	0,2	0,2	0,0	0,2
Power take-off on gearbox													6,8	0,7	7,5	6,9	0,6	7,5
Mp3 CD radio with remote display and RCA (R1-08 v2)	1,4	0,2	1,7	1,4	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,4	0,2	1,7	1,5	0,2	1,7
Bluetooth mp3 CD radio (R2-08 v2)	1,4	0,2	1,7	1,4	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,4	0,2	1,7	1,5	0,2	1,7
Radio tuner only, with jack line on fascia (R0-07)	1,4	0,2	1,7	1,4	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,4	0,2	1,7	1,5	0,2	1,7
100l instead of 80l tank	11,1	6,6	17,7	11,1	6,6	17,7	12,1	5,6	17,7	12,1	5,6	17,7	11,1	6,6	17,7	12,1	5,6	17,7
16 aluminium wheels instead of steel wheels (FWD only)	-0,9	-0,9	-1,8				-0,9	-0,9	-1,8									
Underslung driver's seat instead of driver's seat - Arm rest	17,2	6,3	23,4	17,2	6,3	23,4	18,1	5,3	23,4	18,1	5,3	23,4	17,2	6,3	23,4	18,1	5,3	23,4
Max option seat	2,1	0,8	3,0	2,1	0,8	3,0	2,2	0,7	3,0	2,2	0,7	3,0	2,1	0,8	3,0	2,2	0,7	3,0
Individual passenger seats instead of fixed shelf bench seat on 1/2 bench seat back rest	-1,4	-1,8	-3,2	-1,4	-1,8	-3,2	-1,7	-1,5	-3,2	-1,7	-1,5	-3,2	-1,4	-1,8	-3,2	-1,7	-1,5	-3,2
Without stowage rack under roof	-1,5	-0,4	-2,0	-1,5	-0,4	-2,0	-1,6	-0,4	-2,0	-1,6	-0,4	-2,0	-1,5	-0,4	-2,0	-1,6	-0,4	-2,0
Pneumatic Suspension (FWD only)	-4,0	48,6	44,6				-3,0	47,6	44,6									

	DOUBLE CAB																	
	FRONT WHEEL DRIVE			REAR WHEEL DRIVE			FRONT WHEEL DRIVE			REAR WHEEL DRIVE			TWIN WHEEL REAR DRIVE			TWIN WHEEL REAR DRIVE		
Wheelbase	E2 =3682 mm			E2 =3682 mm			E3 =4332 mm			E3 =4332 mm			E2 =3682 mm			E3 =4332 mm		
	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Driver's seat - Arm rest	1,1	0,4	1,6	1,1	0,4	1,6	1,2	0,4	1,6	1,2	0,4	1,6	1,1	0,4	1,6	1,2	0,4	1,6
Seats - Fixed shelf bench seat on 1/2 bench seat back rest instead of fixed bench seat	0,8	0,4	1,2	0,8	0,4	1,2	0,8	0,4	1,2	0,8	0,4	1,2	0,8	0,4	1,2	0,8	0,4	1,2
Storage - Roof rack	1,5	0,4	1,9	1,5	0,4	1,9	1,5	0,4	1,9	1,5	0,4	1,9	1,5	0,4	1,9	1,5	0,4	1,9
Wheel – bolt cover small	0,4	0,4	0,7	0,4	0,4	0,7	0,4	0,4	0,7	0,4	0,4	0,7	0,4	0,4	0,7	0,4	0,4	0,7
Wheel – bolt cover big	0,8	0,6	1,5	0,8	0,6	1,5	0,9	0,5	1,5	0,9	0,5	1,5						
Seats - Lumbar adjustment	0,1	0,0	0,2	0,1	0,0	0,2	0,1	0,0	0,2	0,1	0,0	0,2	0,1	0,0	0,2	0,1	0,0	0,2
Seats - Rotating shelf bench seat on 1/2 bench seat back rest, storage tray under bench seat and tilting seat cushion instead of fixed shelf bench seat on 1/2 bench seat back rest	5,8	2,6	8,4	5,8	2,6	8,4	6,2	2,2	8,4	6,2	2,2	8,4	5,8	2,6	8,4	6,2	2,2	8,4
Dashboard: upper storage and 1 DIN collapsible shelf	1,8	0,2	2,0	1,8	0,2	2,0	1,8	0,2	2,0	1,8	0,2	2,0	1,8	0,2	2,0	1,8	0,2	2,0
Front side airbag (driver)	0,5	0,4	0,9	0,5	0,4	0,9	0,6	0,3	0,9	0,6	0,3	0,9	0,5	0,4	0,9	0,6	0,3	0,9
Front side airbag (passenger) - not compatible with bench seat	0,8	0,1	0,9	0,8	0,1	0,9	0,7	0,2	0,9	0,7	0,2	0,9	0,8	0,1	0,9	0,7	0,2	0,9
Passenger airbag	1,5	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7
Trailer tow bar	-6,6	29,7	23,1	-6,6	29,7	23,1	-5,6	28,7	23,1	-5,6	28,7	23,1	-9,7	32,1	22,4	-8,3	30,7	22,4
Robotised gearbox (available on 125 bhp and150 bhp)	7,0	-0,5	6,4	7,9	1,1	9,0	6,9	-0,4	6,4	8,0	0,9	9,0	7,9	1,1	9,0	8,0	0,9	9,0
Regulated AC	18,1	-1,8	16,3	18,1	-1,8	16,3	17,9	-1,5	16,3	17,9	-1,5	16,3	18,1	-1,8	16,3	17,9	-1,5	16,3
Locking - Hands Free Access (involves 2-button key)	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3
Trajectory control - ESP + ASR	0,5	0,0	0,5				0,5	0,0	0,5									
Tachograph	1,0	0,3	1,4	1,0	0,3	1,4	1,1	0,3	1,4	1,1	0,3	1,4	1,0	0,3	1,4	1,1	0,3	1,4

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	DOUBLE CAB																	
	FRONT WHEEL DRIVE			REAR WHEEL DRIVE			FRONT WHEEL DRIVE			REAR WHEEL DRIVE			TWIN WHEEL REAR DRIVE			TWIN WHEEL REAR DRIVE		
Wheelbase	E2 =3682 mm			E2 =3682 mm			E3 =4332 mm			E3 =4332 mm			E2 =3682 mm			E3 =4332 mm		
	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Puncture - Puncture kit (no spare wheel - jack and crank maintained)	5,2	-30,9	-25,6	5,2	-30,9	-25,6	4,8	-30,5	-25,6	4,8	-30,5	-25,6	8,4	-33,0	-24,6	7,5	-32,1	-24,6
NFA navigation (involves R1 or R2+C BOX radios)	2,1	0,3	2,5	2,1	0,3	2,5	2,2	0,3	2,5	2,2	0,3	2,5	2,1	0,3	2,5	2,2	0,3	2,5
Power take-off instead of none (FWD and RWD, incompatible with AC)	0,2	0,0	0,2	0,2	0,0	0,2	0,2	0,0	0,2	0,2	0,0	0,2	0,2	0,0	0,2	0,2	0,0	0,2
Power take-off on gearbox (RWD)													6,8	0,7	7,5	6,9	0,6	7,5
Mp3 CD radio with remote display and RCA (R1-08 v2)	1,4	0,2	1,7	1,4	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,4	0,2	1,7	1,5	0,2	1,7
Bluetooth mp3 CD radio (R2-08 v2)	1,4	0,2	1,7	1,4	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,4	0,2	1,7	1,5	0,2	1,7
Radio tuner only, with jack line on fascia (R0-07)	1,4	0,2	1,7	1,4	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,4	0,2	1,7	1,5	0,2	1,7
100l instead of 80l tank	11,1	6,6	17,7	11,1	6,6	17,7	12,1	5,6	17,7	12,1	5,6	17,7	11,1	6,6	17,7	12,1	5,6	17,7
16 aluminium wheels instead of steel wheels (FWD only)	-0,9	-0,9	-1,8				-0,9	-0,9	-1,8									
Underslung driver's seat instead of driver's seat - Arm rest	17,2	6,3	23,4	17,2	6,3	23,4	18,1	5,3	23,4	18,1	5,3	23,4	17,2	6,3	23,4	18,1	5,3	23,4
Max option seat	2,1	0,8	3,0	2,1	0,8	3,0	2,2	0,7	3,0	2,2	0,7	3,0	2,1	0,8	3,0	2,2	0,7	3,0
Individual passenger seats instead of fixed shelf bench seat on 1/2 bench seat back rest	-1,4	-1,8	-3,2	-1,4	-1,8	-3,2	-1,7	-1,5	-3,2	-1,7	-1,5	-3,2	-1,4	-1,8	-3,2	-1,7	-1,5	-3,2
Without stowage rack under roof	-1,5	-0,4	-2,0	-1,5	-0,4	-2,0	-1,6	-0,4	-2,0	-1,6	-0,4	-2,0	-1,5	-0,4	-2,0	-1,6	-0,4	-2,0
Pneumatic Suspension (FWD only)	-4,0	48,6	44,6				-3,0	47,6	44,6									

	COMBI						PLATFORM CAB								
	FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			FRONT WHEEL DRIVE		
Wheelbase	E1 = 3182 mm			E2 =3682 mm			E1 = 3182 mm			E2 =3682 mm			E3 =4332 mm		
	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Driver's seat - Arm rest	1,0	0,5	1,6	1,1	0,4	1,6	1,0	0,5	1,6	1,1	0,4	1,6	1,2	0,4	1,6
Seats - Fixed shelf bench seat on 1/2 bench seat back rest instead of fixed bench seat	0,7	0,5	1,2	0,8	0,4	1,2	0,7	0,5	1,2	0,8	0,4	1,2	0,8	0,4	1,2
Storage - Roof rack	1,4	0,5	1,9	1,5	0,4	1,9	1,4	0,5	1,9	1,5	0,4	1,9	1,5	0,4	1,9
Wheel – small bolt cover	0,4	0,4	0,7	0,4	0,4	0,7	0,4	0,4	0,7	0,4	0,4	0,7	0,4	0,4	0,7
Wheel – big bolt cover	0,7	0,7	1,5	0,8	0,6	1,5	0,7	0,7	1,5	0,8	0,6	1,5	0,9	0,5	1,5
Seats - Lumbar adjustment	0,1	0,1	0,2	0,1	0,0	0,2	0,1	0,1	0,2	0,1	0,0	0,2	0,1	0,0	0,2
Seats - Rotating shelf bench seat on 1/2 bench seat back rest, storage tray under bench seat and tilting seat cushion instead of fixed shelf bench seat on 1/2 bench seat back rest	5,4	3,0	8,4	5,8	2,6	8,4	5,4	3,0	8,4	5,8	2,6	8,4	6,2	2,2	8,4
Dashboard: upper storage and 1 DIN collapsible shelf	1,8	0,2	2,0	1,8	0,2	2,0	1,8	0,2	2,0	1,8	0,2	2,0	1,8	0,2	2,0
Front side airbag (driver)	0,4	0,5	0,9	0,5	0,4	0,9	0,4	0,5	0,9	0,5	0,4	0,9	0,5	0,4	0,9
Front side airbag (passenger) - not compatible with bench seat	0,6	0,3	0,9	0,6	0,3	0,9	0,6	0,3	0,9	0,6	0,3	0,9	0,7	0,2	0,9
Passenger airbag	1,5	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7	1,5	0,2	1,7
Trailer tow bar	-7,3	32,3	25,0	-6,8	31,8	25,0	-6,7	29,8	23,1	-6,6	29,7	23,1	-5,6	28,7	23,1
Mud flaps (FR + RR)	0,9	0,5	1,4	0,9	0,5	1,4	0,8	0,6	1,4	0,9	0,5	1,4	0,9	0,5	1,4
Robotised gearbox (only available on 125 bhp and150 bhp)	7,0	-0,6	6,4	7,0	-0,5	6,4	7,0	-0,6	6,4	7,0	-0,5	6,4	6,9	-0,4	6,4
Regulated AC	14,2	2,1	16,3	18,1	-1,8	16,3	18,1	-1,8	16,3	18,1	-1,8	16,3	17,9	-1,5	16,3
Additional AC (combi and bus only)	4,6	27,1	31,7	6,9	27,5	34,4									

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	COMBI						PLATFORM CAB								
	FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			FRONT WHEEL DRIVE		
Wheelbase	E1 = 3182 mm			E2 =3682 mm			E1 = 3182 mm			E2 =3682 mm			E3 =4332 mm		
	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Locking - Hands Free Access (involves 2-button key)	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3	0,2	0,1	0,3
Trajectory control - ESP + ASR	0,5	0,0	0,5	0,5	0,0	0,5	0,5	0,0	0,5	0,5	0,0	0,5	0,5	0,0	0,5
Tachograph	1,0	0,4	1,4	1,0	0,3	1,4	1,0	0,4	1,4	1,0	0,3	1,4	1,1	0,3	1,4
Puncture - Puncture kit (no spare wheel - jack and crank maintained)	5,7	-31,3	-25,6	5,2	-30,9	-25,6	5,7	-31,3	-25,6	5,2	-30,9	-25,6	4,8	-30,5	-25,6
NFA navigation (involves R1 or R2+C BOX radios)	2,1	0,4	2,5	2,1	0,4	2,5	2,1	0,4	2,5	2,1	0,3	2,5	2,2	0,3	2,5
Power take-off instead of none (FWD and RWD, incompatible with AC)	0,2	0,0	0,2	0,2	0,0	0,2	0,2	0,0	0,2	0,2	0,0	0,2	0,2	0,0	0,2
Mp3 CD radio with remote display and RCA (R1-08 v2)	1,4	0,3	1,7	1,4	0,3	1,7	1,4	0,3	1,7	1,4	0,2	1,7	1,5	0,2	1,7
Bluetooth mp3 CD radio (R2-08 v2)	1,4	0,3	1,7	1,4	0,3	1,7	1,4	0,2	1,7	1,4	0,2	1,7	1,5	0,2	1,7
Radio tuner only, with jack line on fascia (R0-07)	1,4	0,3	1,7	1,4	0,2	1,7	1,4	0,3	1,7	1,4	0,2	1,7	1,5	0,2	1,7
100l instead of 80l tank	10,1	7,6	17,7	11,1	6,6	17,7	10,1	7,6	17,7	11,1	6,6	17,7	12,1	5,6	17,7
16 aluminium wheels instead of steel wheels (FWD only)	-0,9	-0,9	-1,8	-0,9	-0,9	-1,8	-0,9	-0,9	-1,8	-0,9	-0,9	-1,8	-0,9	-0,9	-1,8
Pneumatic Suspension (FWD only)							-0,4	45,0	44,6	-0,4	48,6	44,6	-3,0	47,6	44,6
maximum seat options	2,0	1,0	3,0	2,1	0,8	3,0									
Omission 3. Seat bench	-4,7	-60,3	-65,0	-12,9	-52,1	-65,0									
Underslung driver's seat instead of driver's seat - Arm rest	16,2	7,2	23,4	17,2	6,3	23,4	16,2	7,3	23,4	17,2	6,3	23,4	18,1	5,3	23,4
Individual passenger seats instead of fixed shelf bench seat on 1/2 bench seat back rest	-1,1	-2,0	-3,2	-1,4	-1,8	-3,2	-1,1	-2,0	-3,2	-1,4	-1,8	-3,2	-1,7	-1,5	-3,2
Omission of storage - Roof rack	-1,5	-0,5	-2,0	-1,5	-0,4	-2,0	-1,5	-0,5	-2,0	-1,5	-0,4	-2,0	-1,6	-0,4	-2,0

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	COMBI						PLATFORM CAB								
	FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			FRONT WHEEL DRIVE			FRONT WHEEL DRIVE		
Wheelbase	E1 = 3182 mm			E2 =3682 mm			E1 = 3182 mm			E2 =3682 mm			E3 =4332 mm		
	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
RR running board (FWD) - option on Combis and Buses	-0,4	10,9	10,5	-0,3	10,8	10,5									
Sliding window	1,2	2,2	3,4	1,8	2,3	4,1									
Right-hand glass sliding side door instead of no sliding side door	14,2	22,8	37,0	19,5	21,5	41,0									
Right-hand sliding side door with fixed window instead of no sliding side door	12,6	20,2	32,8	16,9	18,7	35,6									
Left-hand glass sliding side door instead of no sliding side door	14,2	22,8	37,0	19,5	21,5	41,0									
Left-hand sliding side door with fixed window instead of no sliding side door	12,6	20,2	32,8	16,9	18,7	35,6									

2.4 DETERMINING THE CENTRE OF GRAVITY

In general, the dimensions are specified absolutely (value between two points) and the positions relatively (status in reference system). As shown the reference system refers to a centre point of the vehicle on the front axle.

The vehicle's centre of gravity after conversion can be determined:

- by measurement
- by calculation

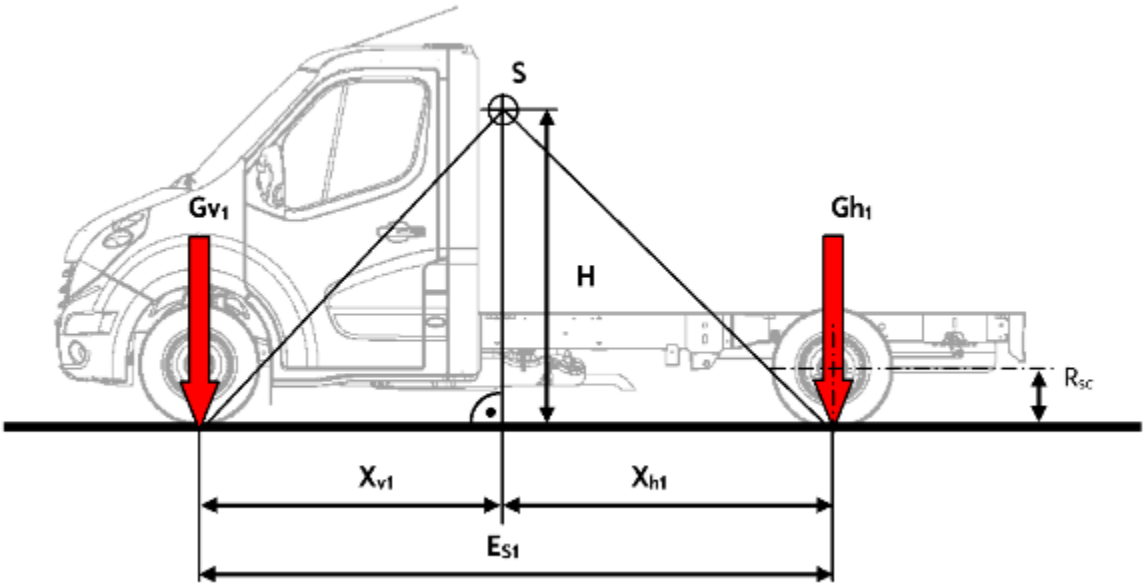
Attention:

The determined centre of gravity must not exceed the stated maximum permissible values, see chapter 3.1.5.

2.4.1 DETERMINING THE CENTRE OF GRAVITY POSITION BY MEASURING AND CALCULATION

X and Y position

The x and y position of the centre of gravity is determined by measuring the mass on each wheel and calculating the barycentre.



Pos.	Description
S	Centre of gravity
E	Wheelbase
v	Front axle
h	Rear axle
H	Height of centre of gravity
Rsc	Loaded radius of the tyre, axle not raised (in m)

Z position

The Z position of the centre of gravity is determined by measuring the variation in mass on one axle. The vehicle is weighed horizontally, and then inclined at an angle θ.

H = Height of the centre of gravity in relation to the floor (in m)

$$H = \frac{E.\Delta M}{Mtot\ .\ tang\ \theta} + Rsc$$

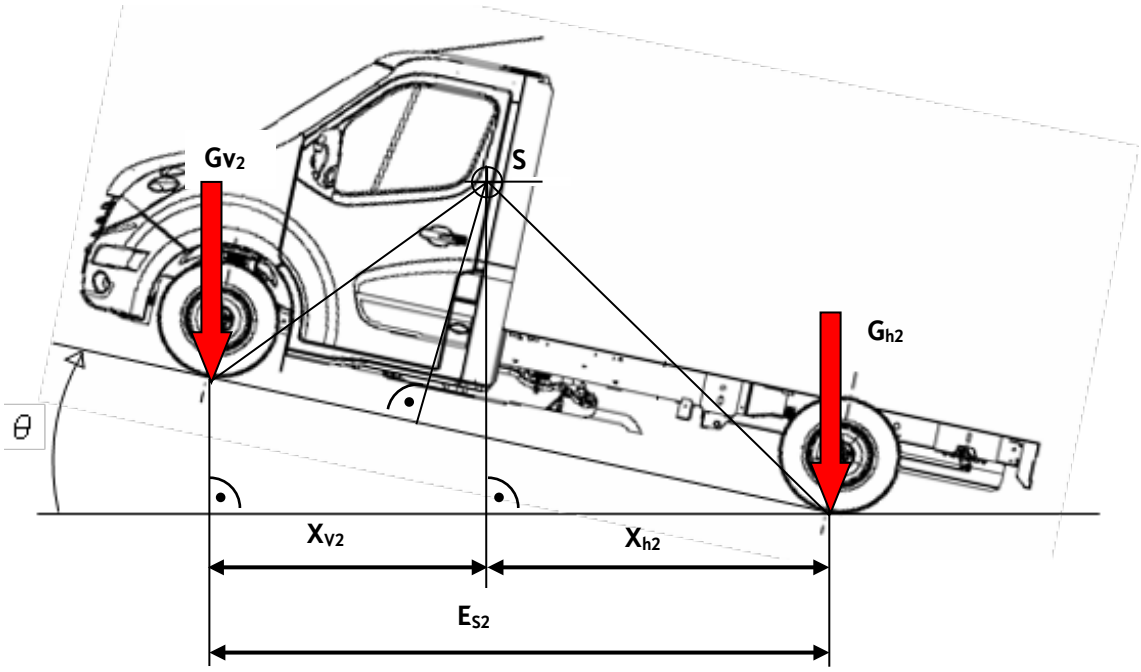
Rsc = Loaded radius of the tyre, axle not raised (in m)

E = Wheelbase (in m)

ΔM = Radial force variation measured on the axle (in kg)

Mtot = Total vehicle mass (in kg)

θ = Vehicle lift angle (in rad)



The measurement requires the following precautions to be taken:

- no moving fluids → tank completely empty or completely full
- Tyres overinflated to the maximum permitted level (to minimise loaded radius variations)
- Front and rear suspensions locked
- the brakes (service and handbrake) **MUST NOT** be applied
- in order to obtain a reliable measurement, the vehicle must be lifted at an angle of at least 20°
- either the front or rear axle may be lifted

2.4.2 DETERMINING THE CENTRE OF GRAVITY OF THE CONVERTED VEHICLE

The converted vehicle's centre of gravity is determined by calculating the barycentre between the centre of gravity positions of the basic and converted vehicles.

2.4.3 THE CENTRE OF GRAVITY OF VEHICLES AS FACTORY FITTED WITHOUT SCR (EURO5)

Comments on the information in the table below:

- The centre of gravity position is given in the vehicle reference guide and in relation to the floor where the Z dimension is concerned (indicated as 'Z (mm)/floor' in the table).
- The positions are given for the extremes (vehicle with min. options and with max. options).

It will be necessary to extrapolate for an intermediate vehicle.

Panel van – Euro5	**MIN. UNLADEN (no options)**			**MAX. UNLADEN (all options)**		
Vehicle variant	X (mm)	Y (mm)	Z (mm) / floor	X (mm)	Y (mm)	Z (mm) / floor
PRS-E2P2H2 EURO5 D1/D2 3,5t	1,690	-26	858	1,793	-30	850
PRS-E2P2H3 EURO5 D1/D2 3,5t	1,702	-26	881	1,802	-30	867
PRJ-E2P2H2 EURO5 D1/D2 4,5t	1,750	-25	831	1,840	-28	830
PRJ-E2P2H3 EURO5 D1/D2 4,5t	1,758	-24	852	1,846	-28	847
PRJ-E3P2H2 EURO5 D1/D2 4,5t	2,045	-18	843	2,123	-23	840
PRJ-E3P2H3 EURO5 D1/D2 4,5t	2,056	-18	867	2,132	-23	858
TRS-E1P1H1 EURO5 D1/D2 2,8t	1,183	-29	806	1,296	-17	802
TRS-E1P1H1 EURO5 D1/D2 3,3t	1,179	-29	805	1,293	-17	801
TRS-E1P1H1 EURO5 D1/D2 3,5t	1,183	-29	809	1,296	-17	805
TRS-E1P1H2 EURO5 D1/D2 2,8t	1,194	-29	833	1,307	-17	826
TRS-E1P1H2 EURO5 D1/D2 3,3t	1,191	-29	831	1,304	-17	825
TRS-E1P1H2 EURO5 D1/D2 3,5t	1,195	-29	835	1,307	-17	829
TRS-E2P1H3 EURO5 D1/D2 3,3t	1,370	-31	854	1,447	-21	829
TRS-E2P1H3 EURO5 D1/D2 3,5t	1,374	-30	858	1,451	-21	833
TRS-E3P1H2 EURO5 D1/D2 3,5t	1,633	-30	766	1,732	-35	842
TRS-E3P1H3 EURO5 D1/D2 3,5t	1,651	-29	877	1,744	-35	853
TRS-E2P1H2 EURO5 D1/D2 3,3t	1,355	-31	832	1,469	-35	823
TRS-E2P1H2 EURO5 D1/D2 3,5t	1,359	-31	836	1,472	-35	827

Platform cab – Euro5	MIN. UNLADEN (no options)			MAX. UNLADEN (all options)		
Vehicle variant	X (mm)	Y (mm)	Z (mm) / floor	X (mm)	Y (mm)	Z (mm) / floor
TRS-E2P1H1 EURO5 D1/D2 3,5t	954	-35	702	981	-44	697
TRS-E2P1H2 EURO5 D1/D2 3,5t	954	-35	712	980	-44	706
TRS-E3P1H1 EURO5 D1/D2 3,5t	1,103	-35	697	1,129	-44	693
TRS-E3P1H2 EURO5 D1/D2 3,5t	1,101	-34	706	1,127	-44	701
TRS-E1P1H1 EURO5 D2 3,5t	861	-35	705	886	-34	700

Chassis cab – Euro5	MIN. UNLADEN (no options)			MAX. UNLADEN (all options)		
Vehicle variant	X (mm)	Y (mm)	Z (mm) / floor	X (mm)	Y (mm)	Z (mm) / floor
PRJ-E2P2 EURO5 D1/D2 4,5t	1,439	-25	697	1,440	-33	699
PRJ-E3P2 EURO5 D1/D2 4,5t	1,620	-18	695	1,617	-26	696
PRJ-E2P1 prime EURO5 D1/D2 4,5t	1,395	-26	700	1,436	-33	698
PRS-E2P1 EURO5 D1/D2 3,5t	1,312	-29	717	1,318	-36	716
PRS-E3P1 EURO5 D1/D2 3,5t	1,507	-25	718	1,508	-33	717
TRS-E2P1 EURO5 D1/D2 3,5t	1,044	-33	707	1,101	-42	700
TRS-E3P1 EURO5 D1/D2 3,5t	1,179	-30	709	1,242	-38	701

Chassis crew cab – Euro5	MIN. UNLADEN (no options)			MAX. UNLADEN (all options)		
Vehicle variant	X (mm)	Y (mm)	Z (mm) / floor	X (mm)	Y (mm)	Z (mm) / floor
PRJ-E2P2 EURO5 D1/D2 4,5t	1,485	-24	734	1,484	-31	732
PRJ-E3P2 EURO5 D1/D2 4,5t	1,658	-17	736	1,653	-24	735
PRS-E2P1 EURO5 D1/D2 3,5t	1,409	-24	765	1,409	-31	762
PRS-E3P1 EURO5 D1/D2 3,5t	1,520	-26	756	1,520	-34	753
TRS-E2P1 EURO5 D1/D2 3,5t	1,178	-27	759	1,220	-35	748
TRS-E3P1 EURO5 D1/D2 3,5t	1,227	-31	750	1,280	-38	741

Note:

The floor specified in the tables is an unladen floor in running condition.
X, Y and Z refer to the fixed reference system in the vehicle, see chapter 2.1.1.
Other important measurements are in the Conversion Guideline, chapter 2.1.2.

2.4.4 THE CENTRE OF GRAVITY OF VEHICLES AS FACTORY FITTED WITH SCR

Panel van – Euro6 and EuroVI

1- Fourgon (F62) avec SCR	Mini a vide Sans option			MAXI a vide toutes options		
Variante véhicule	X	Y	Z	X	Y	Z
FG-PRS-E2P2H2 EURO6 D2+/D3 3,5t	1690	-26	819	1760	-30	838
FG-PRS-E2P2H3 EURO6D2+/D3 3,5t	1697	-26	837	1777	-30	855
FG-PRS-E3P2H2 EURO6 D2+/D3 3,5t	1910	-26	819	2019	-30	838
FG-PRS-E3P2H3 EURO6 D2+/D3 3,5t	1927	-26	837	2031	-30	855
FG-PRJ-E2P2H2 EURO VI D2+/D3 3,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1745	-25	818	1809	-28	819
FG-PRJ-E2P2H2 EURO VI D2+/D3 3,5t SSADPL ou PNLGT,PNLDT	1718	-25	818	1774	-28	819
FG-PRJ-E2P2H3 EURO VI D2+/D3 3,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1765	-24	839	1822	-28	836
FG-PRJ-E2P2H3 EURO VI D2+/D3 3,5t SSADPL ou PNLGT,PNLDT	1738	-24	839	1787	-28	836
FG-PRJ-E2P2H2 EURO VI D2+/D3 4,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1745	-25	818	1809	-28	819
FG-PRJ-E2P2H2 EURO VI D2+/D3 4,5t SSADPL ou PNLGT,PNLDT	1718	-25	818	1774	-28	819
FG-PRJ-E2P2H3 EURO VI D2+/D3 4,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1765	-24	839	1822	-28	836
FG-PRJ-E2P2H3 EURO VI D2+/D3 4,5t SSADPL ou PNLGT,PNLDT	1738	-24	839	1788	-28	836
FG-PRJ-E3P2H2 EURO 6 / VI D2+/D3 3,5t	2004	-18	830	2086	-23	829
FG-PRJ-E3P2H3 EURO 6/ VI D2+/D3 3,5t	2030	-18	854	2107	-23	849
FG-PRJ-E3P2H2 EURO 6 / VI D2+/D3 4,5t	2004	-18	830	2086	-23	829
FG-PRJ-E3P2H3 EURO 6/ VI D2+/D3 4,5t	2030	-18	854	2111	-23	847
FG-TRS-E1P1H1 EURO 6/VI D2+/D3 2,8t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT-	1198	-29	791	1275	-17	790
FG-TRS-E1P1H1 EURO 6/VI D1/D2 2,8t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT-	1204	-29	791	1280	-17	790
FG-TRS-E1P1H1 EURO 6/VI D2+/D3 2,8t SSADPL ou PNLGT,PNLDT-	1175	-29	791	1241	-17	790
FG-TRS-E1P1H1 EURO 6/VI D1/D2 2,8t SSADPL ou PNLGT,PNLDT-	1181	-29	791	1246	-17	790
FG-TRS-E1P1H1 EURO6 / VI D2+/D3 3,3t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT-	1198	-29	790	1275	-17	789
FG-TRS-E1P1H1 EURO6 / VI D1/D2 3,3t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT-	1198	-29	790	1275	-17	789
FG-TRS-E1P1H1 EURO6 / VI D2+/D3 3,3t SSADPL ou PNLGT,PNLDT-	1141	-29	790	1241	-17	789
FG-TRS-E1P1H1 EURO6 / VI D1/D2 3,3t SSADPL ou PNLGT,PNLDT-	1147	-29	790	1246	-17	789
FG-TRS-E1P1H1 EURO6 / VI D2+/D3 3,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1198	-29	794	1275	-17	793
FG-TRS-E1P1H1 EURO6 / VI D1/D2 3,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1204	-29	794	1280	-17	793
FG-TRS-E1P1H1 EURO6 / VI D2+/D3 3,5t SSADPL ou PNLGT,PNLDT-	1157	-29	794	1239	-17	793
FG-TRS-E1P1H1 EURO6 / VI D1/D2 3,5t SSADPL ou PNLGT,PNLDT-	1162	-29	794	1245	-17	793
FG-TRS-E1P1H2 EURO6 / VI D2+/D3 2,8t	1188	-29	817	1282	-17	813
FG-TRS-E1P1H2 EURO6 / VI D1/D2 2,8t	1194	-29	817	1288	-17	813
FG-TRS-E1P1H2 EURO6 / VI D2+/D3 3,3t	1165	-29	815	1282	-17	812
FG-TRS-E1P1H2 EURO6 / VI D1/D2 3,3t	1170	-29	815	1288	-17	812
FG-TRS-E1P1H2 EURO6 / VI D1/D2 3,5t bi turbo	1187	-29	819	1282	-17	816
FG-TRS-E1P1H2 EURO6 / VI D1/D2 3,5t	1192	-29	819	1288	-17	816
FG-TRS-E2P1H2 EURO 6 / VI D2+/D3 3,3t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1367	-31	817	1464	-35	807
FG-TRS-E2P1H2 EURO 6 D1/D2 3,3t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1374	-31	817	1470	-35	807
FG-TRS-E2P1H2 EURO 6 / VI D2+/D3 3,3t SSADPL ou PNLGT,PNLDT	1336	-31	817	1431	-35	807
FG-TRS-E2P1H2 EURO 6 D1/D2 3,3t SSADPL ou PNLGT,PNLDT	1343	-31	817	1437	-35	807
FG-TRS-E2P1H2 EURO 6 / VI D2+/D3 3,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1367	-31	821	1465	-35	815
FG-TRS-E2P1H2 EURO 6 D1/D2 3,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1374	-31	821	1471	-35	815
FG-TRS-E2P1H2 EURO 6 / VI D2+/D3 3,5t SSADPL ou PNLGT,PNLDT	1339	-31	821	1433	-35	815
FG-TRS-E2P1H2 EURO 6 D1/D2 3,5t SSADPL ou PNLGT,PNLDT	1345	-31	821	1439	-35	815
FG-TRS-E2P1H3 EURO 6 / VI D2+/D3 3,3t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1385	-31	839	1467	-21	818
FG-TRS-E2P1H3 EURO 6 D1/D2 3,3t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1391	-31	839	1473	-21	818
FG-TRS-E2P1H3 EURO 6 / VI D2+/D3 3,3t SSADPL ou PNLGT,PNLDT	1357	-31	839	1428	-21	818
FG-TRS-E2P1H3 EURO 6 D1/D2 3,3t SSADPL ou PNLGT,PNLDT	1363	-31	839	1434	-21	818
FG-TRS-E2P1H3 EURO 6 / VI D2+/D3 3,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1389	-30	843	1460	-21	825
FG-TRS-E2P1H3 EURO 6 D1/D2 3,5t PLCBOR ou SUSPN1 ou SSADPL sauf PNLGT,PNLDT	1395	-30	843	1468	-21	825
FG-TRS-E2P1H3 EURO 6 / VI D2+/D3 3,5t SSADPL ou PNLGT,PNLDT	1361	-30	843	1431	-21	825
FG-TRS-E2P1H3 EURO 6 D1/D2 3,5t SSADPL ou PNLGT,PNLDT	1367	-30	843	1437	-21	825
FG-TRS-E3P1H2 EURO 6 / VI D2+/D3 3,5t	1593	-30	753	1691	-35	830
FG-TRS-E3P1H2 EURO6 D2- 3,5t	1601	-30	753	1698	-35	830
FG-TRS-E3P1H3 EURO 6 / VI D2+/D3 3,5t	1632	-29	861	1699	-35	840
FG-TRS-E3P1H3 EURO 6 D2- 3,5t	1639	-29	861	1705	-35	840

Platform cab – Euro6 and EuroVI

Plancher Cabine €	Mini a vide Sans option			MAXI a vide toutes options		
Variante véhicule	X	Y	Z	X	Y	Z
PC-TRS-E1P1 EURO6 D2+/D3	859	-35	688	879	-34	679
PC-TRS-E1P1 EURO6 D1/D2	864	-35	692	884	-34	683
PC-TRS-E1P1 EUROVI D2+/D3	859	-35	698	879	-34	689
PC-TRS-E1P1 EURO VI D1/D2	864	-35	702	884	-34	693
PC-TRS-E2P1H1 EURO6 D2+/D3	952	-35	688	1006	-44	679
PC-TRS-E2P1H1 EURO6 D1 / D2	957	-35	692	1011	-44	683
PC-TRS-E2P1H2 EURO VI D2+/D3	951	-35	698	1000	-44	689
PC-TRS-E2P1H2 EUROVI D1 / D2	957	-35	702	1005	-44	693
PC-TRS-E25P1H1 EURO6 D2+/D3	1012	-35	688	1099	-44	679
PC-TRS-E25P1H1 EURO6 D1/D2	1018	-35	692	1104	-44	683
PC-TRS-E25P1H2 EURO6 D2+/D3	1007	-34	698	1088	-44	689
PC-TRS-E25P1H2 EURO6 D1 / D2	1013	-34	702	1093	-44	693
PC-TRS-E25P1H1 EURO VI D2+/D3	1012	-35	688	1099	-44	679
PC-TRS-E25P1H1 EURO VI D1/D2	1018	-35	692	1104	-44	683
PC-TRS-E25P1H2 EURO VI D2+/D3	1007	-34	698	1088	-44	689
PC-TRS-E25P1H2 EURO VI D1 / D2	1013	-34	702	1093	-44	693
PC-TRS-E3P1H1 EURO6 D2+/D3	1097	-35	683	1191	-44	679
PC-TRS-E3P1H1 EURO6 D1/D2	1103	-35	687	1196	-44	683
PC-TRS-E3P1H2 EURO6 D2+/D3	1094	-34	691	1181	-44	683
PC-TRS-E3P1H2 EURO6 D1 / D2	1100	-34	695	1187	-44	686
PC-TRS-E3P1H1 EURO VI D2+/D3	1097	-35	683	1191	-44	679
PC-TRS-E3P1H1 EURO VI D1/D2	1103	-35	687	1196	-44	683
PC-TRS-E3P1H2 EURO VI D2+/D3	1094	-34	691	1181	-44	683
PC-TRS-E3P1H2 EURO VI D1 / D2	1100	-34	695	1187	-44	686

Chassis cab – Euro6 and EuroVI

Châssis Cabine (U)	Mini a vide Sans option			MAXI a vide toutes options		
Variante véhicule	X	Y	Z	X	Y	Z
CC-PRS-E3P1 EURO VI D2-/D2+/D3	1391	-25	709	1470	-33	706
CC-PRJ-E2P2 EURO VI D1/D2-/D2+/D3 3,5t	1414	-25	686	1415	-33	690
CC-PRJ-E2P2 EURO VI D1/D2-/D2+/D3 4,5t	1413	-25	689	1414	-33	692
CC-PRJ-E3P2 EURO VI D2-/D2+/D3 3,5t	1590	-18	684	1665	-26	697
CC-PRJ-E3P2 EURO VI D1/D2-/D2+/D3 4,5t	1590	-18	684	1663	-26	699
CC-PRS-E2P1 EURO VI /D2-/D2+/D3	1236	-29	718	1279	-36	705
CC-PRJ-E2P1 EURO VI D2-/D2+/D3 2,5t	1413	-29	686	1414	-36	690
CC-PRJ-E2P1 EURO VI D2-/D2+/D3 3,5t	1413	-29	689	1414	-36	692
CC-TRS-E2P1 EURO6 D2+/D3	1013	-33	703	1142	-42	688
CC-TRS-E2P1 EURO6 D1 / D2	1018	-33	706	1147	-42	691
CC-TRS-E2P1 EURO VI D2+/D3	1013	-33	703	1142	-42	688
CC-TRS-E2P1 EURO VI D1 / D2	1018	-33	706	1147	-42	691
CC-TRS-E25P1 EURO6 D2+/D3	1067	-33	703	1217	-42	688
CC-TRS-E25P1 EURO6 D1 / D2	1108	-33	706	1248	-42	691
CC-TRS-E25P1 EURO VI D2+/D3	1067	-33	703	1217	-42	688
CC-TRS-E25P1 EURO VI D1 / D2	1108	-33	706	1248	-42	691
CC-TRS-E3P1 EURO6 D2+/D3	1159	-30	702	1320	-38	690
CC-TRS-E3P1 EURO6 D1 / D2	1165	-30	706	1326	-38	694
CC-TRS-E3P1 EURO VI D2+/D3	1159	-30	702	1320	-38	690
CC-TRS-E3P1 EURO VI D1 / D2	1165	-30	706	1326	-38	694

Chassis crew cab – Euro6 and EuroVI

Châssis Double Cabine (H)	Mini a vide Sans option			MAXI a vide toutes options		
Variante véhicule	X	Y	Z	X	Y	Z
DC-TRS-E2P1 EURO6 D2+/D3 biturbo	1175	-27	756	1210	-35	743
DC-TRS-E2P1 EURO6 D1/D2	1181	-27	756	1215	-35	743
DC-TRS-E2P1 EURO VI D2+/D3	1175	-27	756	1210	-35	743
DC-TRS-E2P1 EURO VI D1/D2	1181	-27	756	1215	-35	743
DC-TRS-E3P1 EURO6 D2+/D3 biturbo	1220	-31	737	1269	-38	731
DC-TRS-E3P1 EURO6 D1/D2	1225	-31	737	1275	-38	731
DC-TRS-E3P1 EURO VI D2+/D3 biturbo	1220	-31	737	1269	-38	731
DC-TRS-E3P1 EURO VI D1/D2	1225	-31	737	1275	-38	731
DC-PRS-E2P1 EURO VI D2-/D2+/D3	1383	-24	753	1386	-31	751
DC-PRS-E3P1 EURO VI D2-/D2+/D3	1495	-26	744	1496	-34	742
DC-PRJ-E2P2 EURO VI D2-/D2+/D3 3,5t	1464	-24	723	1464	-31	722
DC-PRJ-E2P2 EURO VI D2-/D2+/D3 4,5t	1464	-24	723	1464	-31	722
DC-PRJ-E3P2 EURO VI D2-/D2+/D3 3,5t	1631	-17	725	1627	-24	725
DC-PRJ-E3P2 EURO VI D2-/D2+/D3 4,5t	1631	-17	725	1627	-24	725

Glossary:

- TRS: front-wheel drive vehicle
- PRS: rear-wheel drive vehicle with single-wheel
- PRJ: rear-wheel drive vehicle with twin-wheel
- E1 to E3: Wheelbase
  - E1 = 3,182mm
  - E2 = 3,682mm
  - E3 = 4,332mm
- P1 to E2: Rear overhang
  - P1* = short
  - P2* = long
- H1 to H3: Roof height*
- D: engine (1 - 3)
- EURO 5 / 6 / VI: emissions compliance
- t: Tons (Weight for GVW 2,8 / 3,3 / 3,5 / 4,5t)
- Mini a vide Sans option: min. EMPTY without option
- Maxi a vide toutes option: max. EMPTY all options
- Variante véhicule: Vehicle model

= For the corresponding values, refer to chapter 2.1.2-DIMENSIONS.

Note:

The floor specified in the tables is an unladen floor in running condition.
X, Y and Z refer to the fixed reference system in the vehicle, see chapter 2.1.1.
Other important measurements are in the Conversion Guideline, chapter 2.1.2.

2.5 GROUND CLEARANCE

2.5.1 PANEL VAN

The ground clearance is given for a vehicle with a Gross Vehicle Weight (GVW).

	Height	Wheelbase (mm)	GVW (Kg)	Min. ground clearance (mm)
Panel van L1 front wheel drive	H1	3,182	2,800	189
			3,300	182
			3,500	186
	H2	3,182	2,800	188
			3,300	182
			3,500	186
Panel van L2 front wheel drive	H2	3,682	3,300	174
			3,500	178
	H3	3,682	3,300	173
			3,500	178
Panel van L3 front wheel drive	H2	4,332	3,500	172
	H3			169
Panel van L3, single wheel rear drive	H2	3,682	3,500	197
	H3			
Panel van L3 twin wheel rear drive	H2	3,682	4,500	181
	H3			
Panel van L4 twin wheel rear drive	H2	4,332	4,500	167
	H3			

2.5.2 PLATFORM CAB

	Height	Wheelbase (mm)	GVW (Kg)	Min. ground clearance (mm)
Platform cab L1	H1	3,182	3,500	166
Platform cab L2	H1	3,682		
	H2			
Platform cab L3	H1	4,332		
	H2			

2.5.3 CHASSIS CAB

	Height	Wheelbase (mm)	GVW (Kg)	Min. ground clearance (mm)
Chassis cab L2, front wheel drive	H1	3,682	3,500	166
Chassis cab L2, front wheel drive		3,682		
Chassis cab L2, single wheel rear drive		3,682		
Chassis cab L3, single wheel rear drive		4,332		
Chassis cab L3, twin wheel rear drive		3,682	4,500	
Chassis cab L4, twin wheel rear drive		4,332		

2.5.4 CHASSIS DOUBLE CAB

	Height	Wheelbase (mm)	GVW (Kg)	Min. ground clearance (mm)
Chassis double cab L2, front wheel drive	H1	3,682	3,500	169
Chassis double cab L2, front wheel drive		3,682		
Chassis double cab L2, single wheel rear drive		3,682		197
Chassis double cab L3, single wheel rear drive		4,332		
Chassis double cab L3, twin wheel rear drive		3,682	4,500	167
Chassis double cab L4, twin wheel rear drive		4,332		

3 CONVERSION LIMITS AND CALCULATIONS

3.1 CONVERSION LIMITS AND ESP

Following must be respected for any conversion:

1- Maximum axle loads ⇨ chapter 2.3

2- Specification for correct ESP working ⇨ chapter 3.1.3

3- Permissible dimensions ⇨ chapter 2.1

Attention:

- The permissible axle loads, gross vehicle weights and centre of gravity locations must be complied with. Further information regarding permissible weights is contained on the vehicle type identification plates on the vehicle itself.
- On no account should modifications be made to the vehicle width, vehicle height or vehicle length if they exceed the threshold values specified in the current version of the body / equipment.
- When installing a new coupling, reinforcements are required and validation must be planned in accordance with legal requirements.
- It is prohibited to cut the rear attachment of the leaf spring and the rear end cross member.
- The conversion must not affect the correct mode of the ESP system.
- For Rear-wheel-drive versions, the maximum authorised overhang for the loading compartment (D2) is more restrictive than the maximum-extension overhang (D1); The space between the end of the loading compartment and the maximum extension may only be employed to install components solely used statically; example: tailgate.

3.1.1 EXTENSION OF THE REAR OVERHANG

Chassis single cab and crew cab

Modification of the rear overhang will alter the distribution of load on the vehicle axles. Make sure that you do not exceed the permissible axle loads. Doing so would prevent the ESP system from functioning correctly on vehicles which are equipped with this feature. Further information regarding permissible weights is contained on the vehicle type identification plates on the vehicle itself. (Also see chapter 2.3). The extension to the rear overhang must not exceed the maximum authorized body limit.

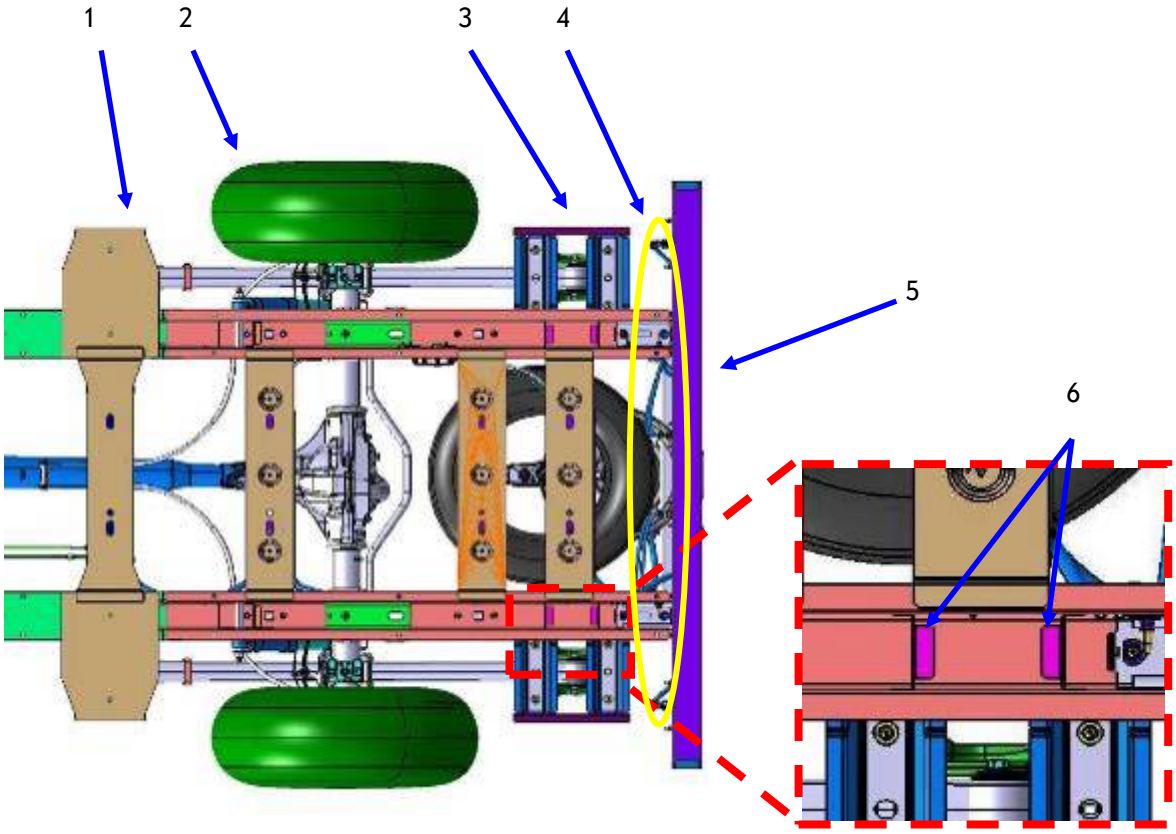
Note:

An extended overhang prevents:

- When installing a new trailer coupling device, reinforcers should be planned accordingly and ensure validation in accordance with the regulatory requirements.

The recommended extension area [**4**] is determined according to structural constraints (Rear leaf spring attachment, etc.) and the existence of cross members or reinforcements. The extension area is located between the rear suspension attachments [**3**] and the rear end cross member [**5**].

REAR CHASSIS: AERIAL VIEW (WITH CLOSURE ELEMENTS REMOVED)



Pos.	Description
1	Rear axle front attachment
2	Rear axle + wheel
3	Rear axle rear attachment
4	Cutting area
5	Rear end cross member
6	Side member internal reinforcement

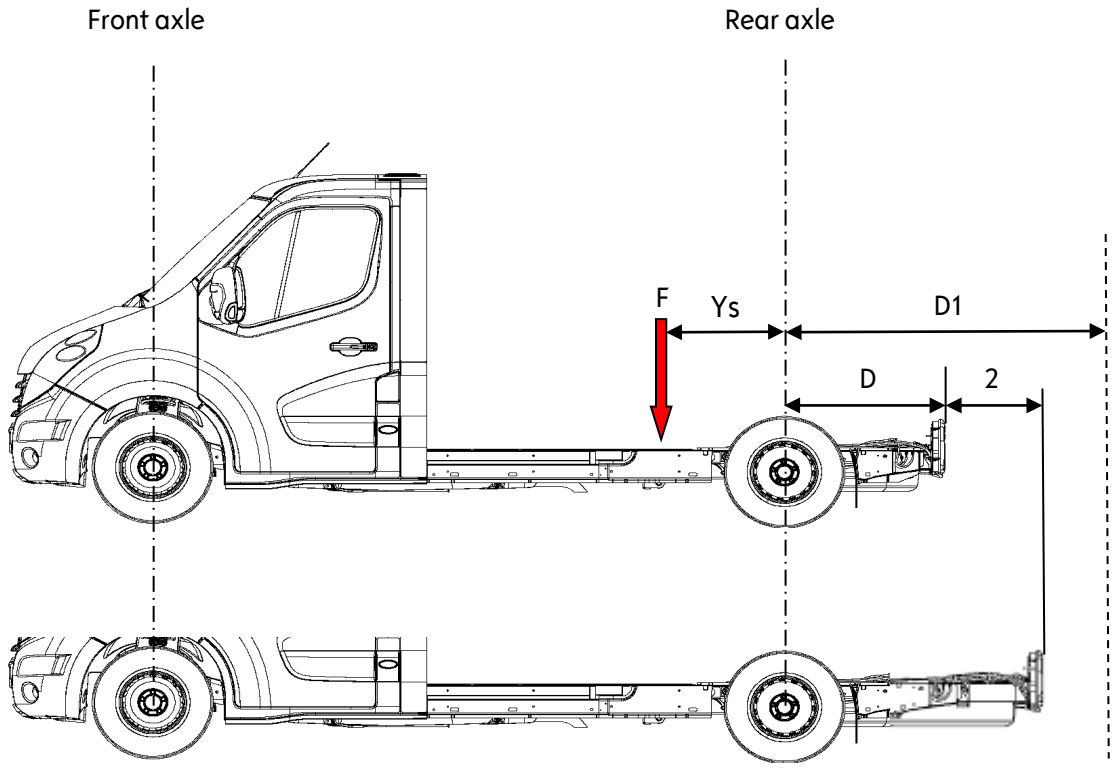
The reinforcements in the side members **[6]** must be kept. If a modification is made, these side members must be reinforced by equivalent parts.

An extension of more than 385mm requires one or more cross members to be added.

The rear tow eye function must be kept.

Platform-cab

It is prohibited to cut the rear attachment of the leaf spring and the rear end cross member in the platform cab version. In the case of the fitting of a towbar it is the responsibility of the converter to observe the regulations. Depending on the overhang extension, one or more under floor reinforcing cross members may be added between the main side members.



Pos.	Description
2	Extension of rear overhang
D	Standard rear overhang
D1	Maximum rear overhang
Ys	Distance between the centre of gravity of the loading area in relation to the rear axle

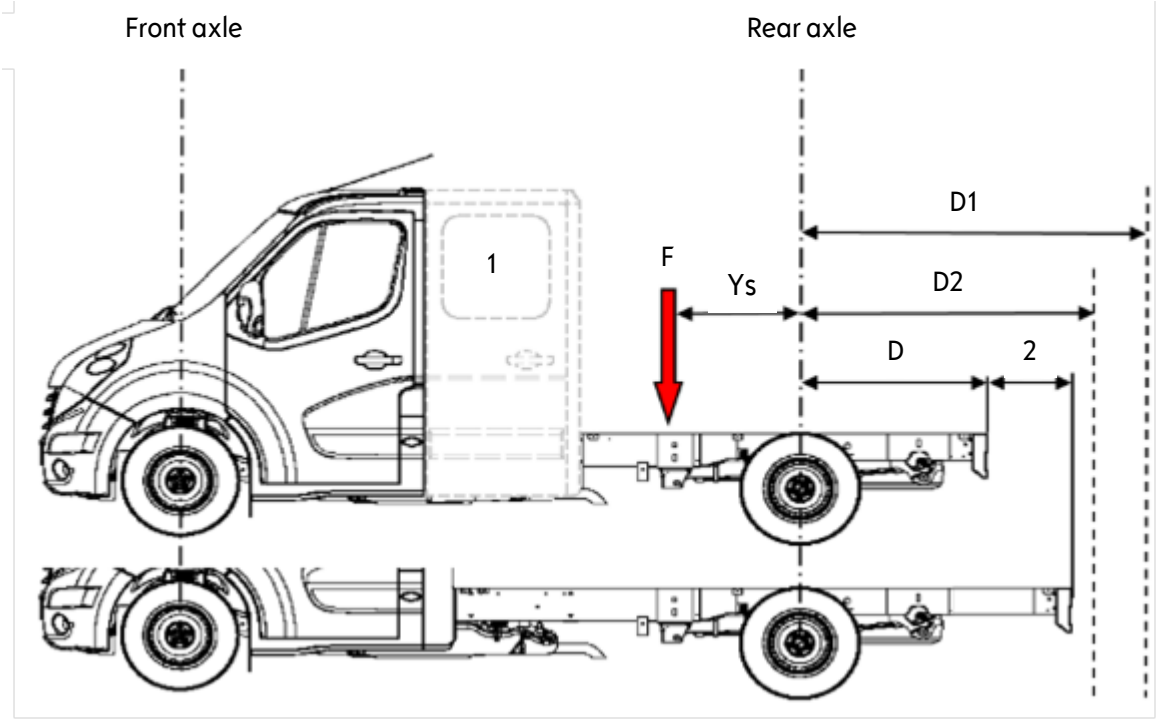
The Ys dimension is positive when the centre of gravity of the loading is located in front of the rear axles.

The converted vehicle may not exceed the maximum length, see chapter 2.1.

Attention:

This type of modification may negatively affect the operation of TSM (trailer sway control)

Chassis single cab and crew cab



Pos.	Description
1	Crew cab
2	Extension of rear overhang
D	Standard rear overhang
D1	Maximum rear overhang
D2	Loading compartment rear overhang
Ys	Distance between the centre of gravity of the loading area in relation to the rear axle

The Ys dimension is positive when the centre of gravity of the loading is located in front of the rear axles.

The converted vehicle may not exceed the maximum length, see chapter 2.1.

Attention:

This type of modification may negatively affect the operation of TSM (trailer sway control)

For Rear-wheel-drive versions, the maximum authorised overhang for the loading compartment (D2) is more restrictive than the maximum-extension overhang (D1). The space between the end of the loading compartment and the maximum extension may only be employed to install components solely used statically; example: tailgate.

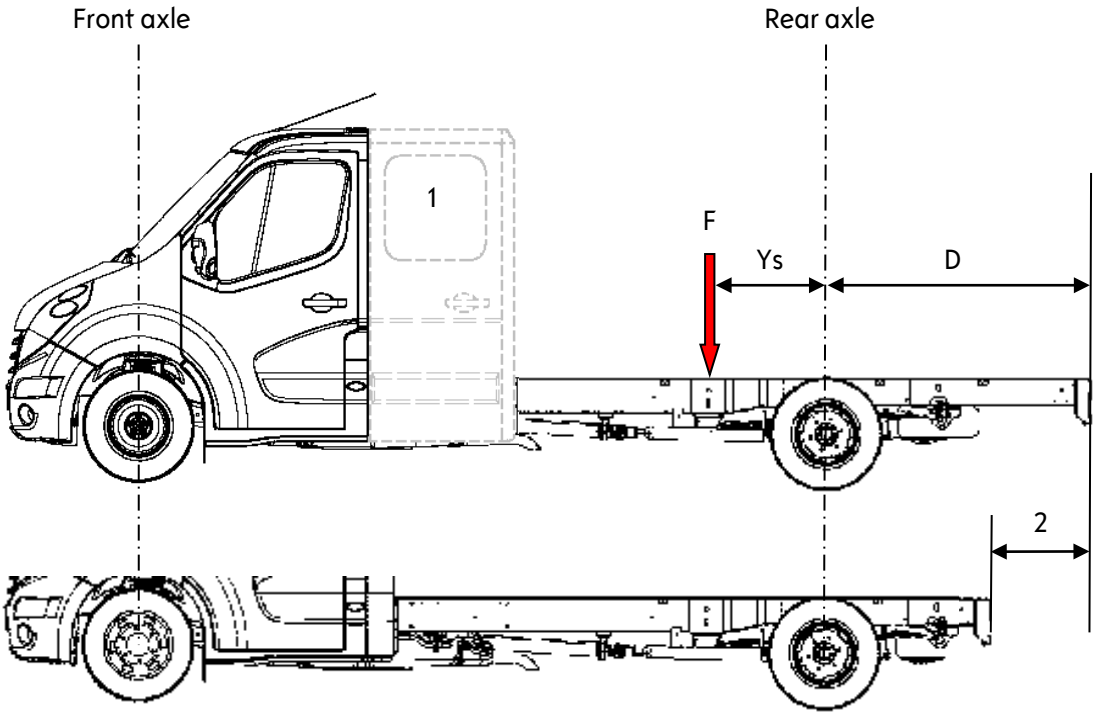
3.1.2 SHORTENING OF THE REAR OVERHANG

The shortening of the rear overhang shall apply to the versions with rear-wheel drive for the chassis with single cab and crew cab.

The shortening area is located between the rear bracket of the rear suspension (3) and the rear cross member (5).

If a towbar is installed, reinforcements should be planned accordingly.

Chassis single cab and crew cab (with RWD)



Pos.	Description
1	Crew cab
2	Shortened rear overhang
D	Standard rear overhang
Ys	Distance between the centre of gravity of the loading area in relation to the rear axle

The Ys dimension is positive when the centre of gravity of the loading is located in front of the rear axles.

The dimensions of the vehicle, see chapter 2.1.

Attention:

This type of modification may negatively affect the operation of TSM (trailer sway control)

3.1.3 LENGTHENING OF THE WHEELBASE

Alteration of the wheelbase is not generally recommended. The Movano range with 3 wheelbase options caters for most application purposes. However, if it is necessary to alter the wheelbase, ensure that the following recommendations are complied with.

Modification of the wheelbase with front wheel drive will alter the distribution of load on the vehicle axles.

For any wheelbase lengthening operation, this variation must be taken into account and it must be ensured that the maximum permissible load values per axle are respected, also see chapter 2.3.

Impacts related to the changes on the basic vehicle are the responsibility of the converter.

The extension is limited by the maximum length of the vehicle if no other information exists, see also chapter 2.1.

Note:

The following instructions must be followed with regard to the braking control system:

- No changes to the hoses
- No change to the handbrake cables, but lengthened control rod.
- Compliance with the handbrake adjustment procedure.

Attention:

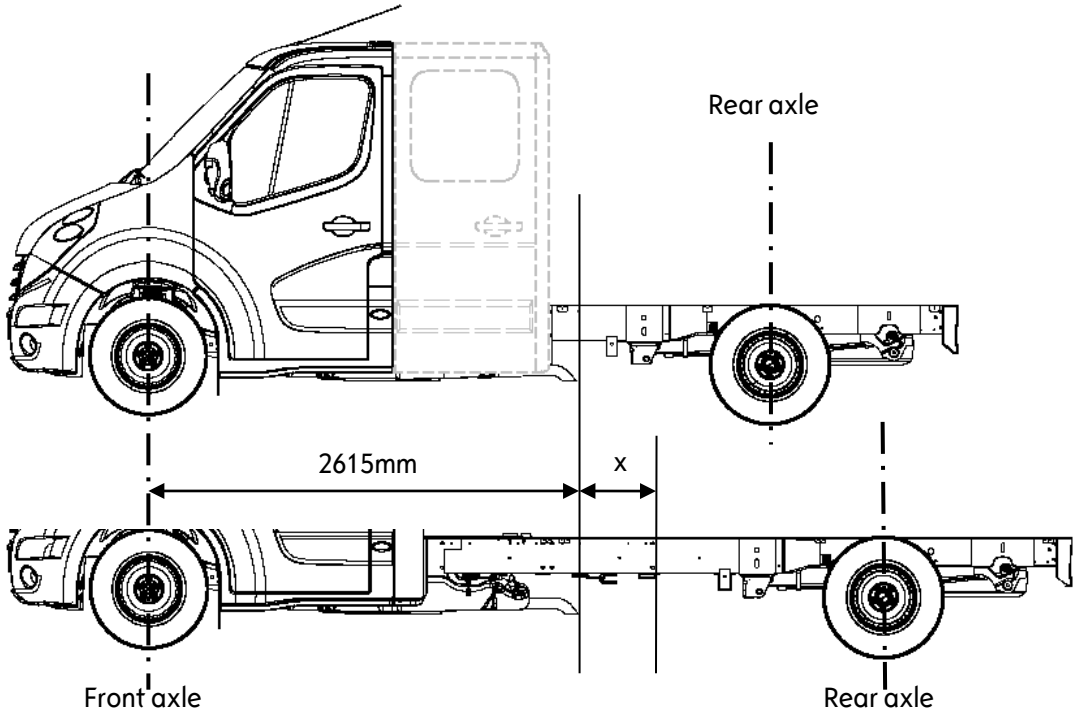
- Opel/ Vauxhall do not allow any modification to the wheelbase on rear wheel drive vehicles.
- For front-wheel drive vehicles
  - Wheelbase L1 - 3182mm – For each extension of the wheelbase it is required to replace the original ESP calibration by „Only ABS“.
  - Wheelbase L2 - 3682mm – It is possible to extend the wheelbase up to 10%. Therefore the original calibration does not have to be modified. The calibration “Only ABS” is required for extensions above 10%.
  - Wheelbase L3 - 4332mm – 10 % extension is allowed in case the original ESP calibration is replaced by „ESP OFF“ or „Only ABS“. For extensions above 10% the calibration „Only ABS“ is required. Wheelbase reduction requires the calibration „ESP OFF“.
- For safety reasons it is not allowed to shorten or extend the ABS cable.
- The permissible axle loads, gross vehicle weights and centre of gravity locations must be complied with. Further information regarding permissible weights is contained on the vehicle type identification plates on the vehicle itself.
- The minimum front axle load must be complied with in all load states.
- On no account should modifications be made to the vehicle width, vehicle height or vehicle length if they exceed the threshold values specified in the current version of the Conversion Guideline.

Chassis single cab and crew cab

The recommended splice line has been determined based on considerations of structural soundness (maintenance of the tank and exhaust interfaces) and the location of cross members and reinforcements. The splice line is located 2615mm behind the front axle.

The overlap between the longitudinal beam and reinforcement must be at least 300mm on each side.

Depending on the overhang extension, one or more under-floor reinforcing cross members may be added between the main side members.



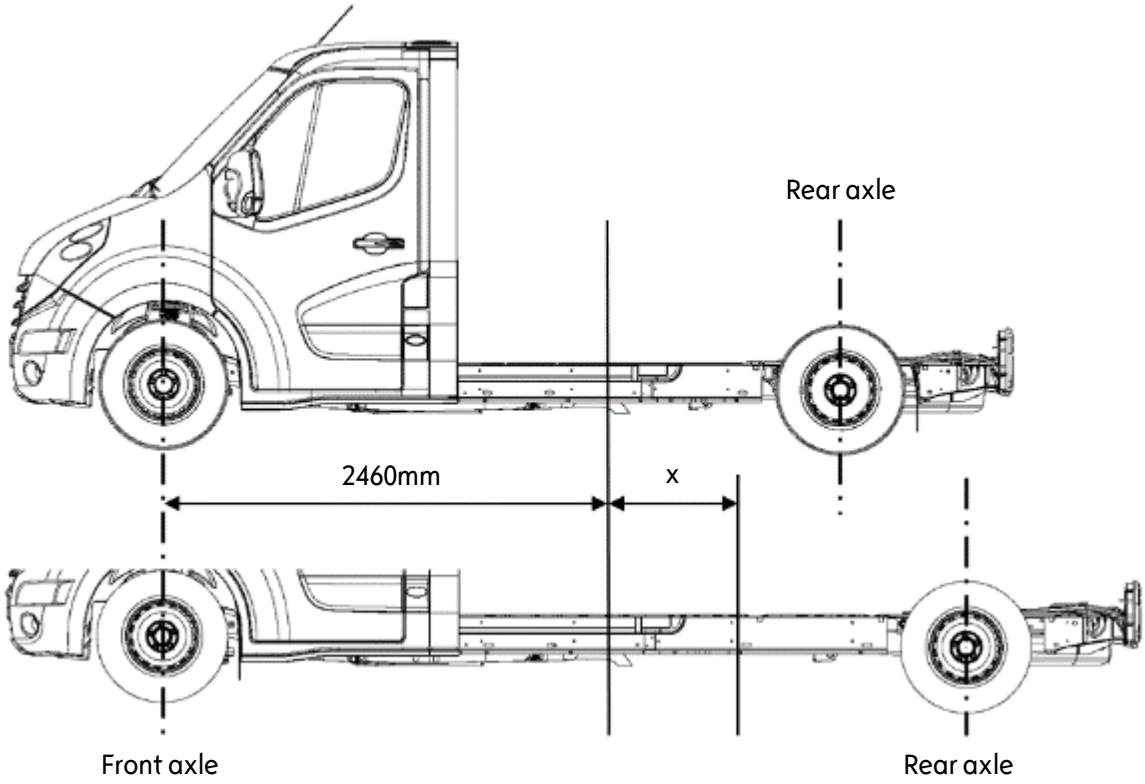
Pos.	Description
X	Wheelbase extension

Platform cab

The recommended splice line has been determined based on considerations of structural soundness (maintenance of the tank and exhaust interfaces) and the location of cross members and reinforcements. The splice line is located 2460mm behind the front axle.

For a large extension to the wheelbase (10% max.), depending on the floor panel used, one or two under floor reinforcement cross members may be added between the main side members.

The overlap between the longitudinal beam and reinforcement must be at least 200mm on each side.



Pos.	Description
x	Wheelbase extension

3.1.4 CONVERSION LIMITS WITH ESP

Since the first of November 2014, ESP is obligatory and standard for all Opel/ Vauxhall Movano models.

ESP is a dynamic vehicle control system which controls both dynamic directional and transverse forces acting on the vehicle. Modifications to vehicles with ESP may cause this system to stop functioning correctly and may lead to system shutdowns and incorrect control interventions. Conversions must not disrupt the operation of the ESP.

If an attachment, the body, mounted equipment or modifications cause an extreme displacement of the centre of gravity on a vehicle equipped with ESP, the converter contributes the sole responsibility and must ensuring that ESP works properly. Where required, the ESP should be deactivated or it is recommended to choose a vehicle without ESP.

Modification	Detail	Comments	Recommended calibration: ESP Off	Recommended calibration: ABS only
Weights	Position of the centre of gravity	Outside area „V“: see chapter 3.1.5	X	
Structure	Wheelbase Increase (Front wheel drive)	Up to 4,765mm (E3 + 10%)	X	
		Beyond 4765 mm		X
	Body stiffness	Maximum 30% reduction in body torsional stiffness along the X axis (measured between the two axles) pre- and post-conversion.	X	
	Ways		X	
Chassis	All modifications to the suspension and **Front** axle	Anything that changes the stiffness and/or elasto-kinematics of the suspension		X
	All modifications to the suspension and **Rear** axle	Anything that changes the stiffness and/or elasto-kinematics of the suspension.	X	
	Wheels and tires		X	
	Steering		X	
	Brake system	Modification to a component of the braking system	X	
Powertrain	Engine, gearbox, calibrations		X	
Electromagnetic retarder			X	
The sensors connected to the ESP (steering-wheel angle, wheel speed, lateral acceleration, yaw angle)	Displacement and modification of the installation		X	
CAN - Bus			X	
Trailer unit (semi-trailer type)			X	

Note:

The calibration of the ESP unit must be modified.

Wheel side:

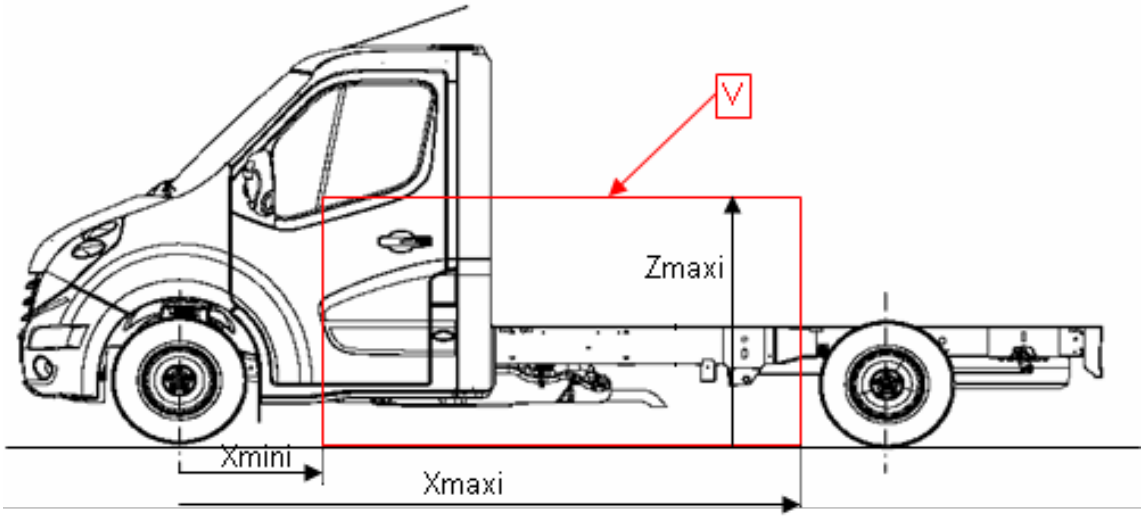
In all events, the ABS targets must be retained or be adapted to the new wheel diameter in order to retain the right wheel speed information.

3.1.5 CENTRE OF GRAVITY POSITION OF THE CONVERTED VEHICLE

The centre of gravity of the converted vehicle must be calculated when the vehicle is:

Laden = GVW (Gross Vehicle Weight) with technical maximum permitted on one axle

To ensure that the ESP functions properly, ESP, the position of the centre of gravity must remain with the limits of the **V** marker (see figure and table below), regardless of the load of the **converted vehicle.**



The tolerance for X and Y is ± 8%.

Only the Z position of the centre of gravity when laden (GVW) should be taken into consideration.

Please refer to the following tables for the limits „V“ of each vehicle type.

FRONT WHEEL DRIVE

	Wheelbase	X mini/maxi (mm)	Y (mm)	Z maxi (mm)
Panel van and platform cab, GWV = 3,5t	3,182	1,657/2,097	Y ± 85	1,100
	3,682	1,770/2,435		1,100
	4,332	1,774/2,742		1,100
	Opel/ Vauxhall air suspension	As above		1,100
Bus GVW = 3,9t	4,332	As above		1,100

REAR WHEEL DRIVE

	Wheelbase	X mini/maxi (mm)	Y (mm)	Z maxi (mm)
Panel van, GVW = 3,5t, single wheels	3,682	1,857/2,652	Y ± 85	1,100
Panel van, GVW = 4,5t, twin wheels	3,682	1,887/2,975		1,100
	4,332	2,068/3,412		1,100

FRONT WHEEL DRIVE

	Wheelbase	X mini/maxi (mm)	Y (mm)	Z maxi (mm)
Chassis cab and double cab, GVW = 3,5t	3,682	1,603*/2,548	Y ± 85	1,100
	E25-Camper van	1,945/2,330		1,100 or 1,150 (wider axle)
	4,332	1,756/2,992		1,100
	Opel/ Vauxhall air suspension	As above		1,100

REAR WHEEL DRIVE

	Wheelbase	X mini/maxi (mm)	Y (mm)	Z maxi (mm)
Chassis cab and double cab, GVW = 3,5t, single wheels	3,682	1,857/2,652	Y ± 85	1,100
	4,332	2,068/3,412		1,100
Chassis cab and double cab, GVW = 4,5t, twin wheels	4,332	2,068/3,412		1,100
	3,682	1,887/2,975		1,100

Note:

For the calculation of the centre of gravity and its position on the basic vehicle, see chapter 2.4.

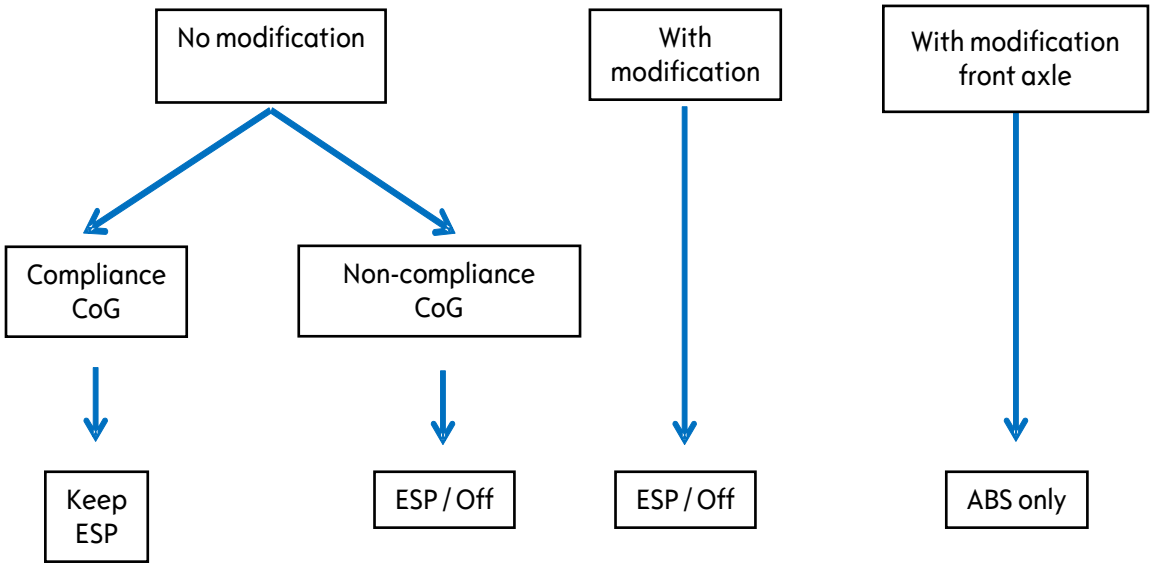
The X dimensions are given in relation to the centre of the front wheel.

The Y dimensions are given in relation to the centreline of the vehicle.

The Z dimensions are measured in relation to the ground.

3.1.6 CALIBRATION OF THE OPTION „ESP OFF“ AND „ONLY ABS“

Procedure to be followed according to the type of modification



Cog = Centre of gravity position

Attention:

This operation is only possible for conversions authorised by the regulations ("limited series", type of vehicle)

When the standard calibration is replaced by an "ESP Off" calibration, this renders null and void approval, as indicated in appendix 9 of regulation ECE13H.

Switching off the ESP system may cause that the driver loses control over the vehicle (sliding, rolling over). The manner of driving must be adapted.

The converter will have to put a well visible warning sticker on the dashboard that the ESP has been disabled. The converter must point to the changed handling characteristics of the vehicle.

Depending on the calibration certain function become deactivated. The table below shows which functions are deactivated during the appropriate adjustment.

	Full ESP	ESP Off	ABS only (FWD)
ABS	X	X	X
EBD: Electronic brake distribution	X	X	X
EBA: Emergency Brake Assist	X	X	X
VDC: trajectory control	X		
ASR/TCS: traction control - anti-skid	X	X	
ROM/RMF: roll-over protection	X		
AHW: automatic hazard warning lights	X	X	
HSA: Hill start assist	X	X	
TSM: Trailer sway control	X		

„ESP Off“ calibrations

The "ESP Off" calibrations have been developed with the aim of deactivating certain functions while retaining others:

The deactivated functions are:

- Trajectory control (VDC),
- Roll-over protection (ROM/RMF)
- Trailer sway control (TSM)

The functions retained are:

- ABS,
- Traction control (TCS/ASR),
- Extended Grip,
- Hill Start Assist.

It is recommended to apply "ESP Off" calibration for all modifications to the rear axle.

Attention:

When the standard calibration is replaced by an "ESP Off" calibration, this renders approval null and void, as indicated in appendix 9 of regulation ECE13H.

"ABS Only" calibrations

In certain cases where the vehicle undergoes major conversion, it may be necessary to deactivate almost all of the ESP functions.

The only function retained in that case is ABS.

"ABS Only" calibrations are only available for front-wheel drive versions.

It is recommended to apply "ABS Only" calibration for all modifications to the front axle.

Attention:

When the standard calibration is replaced by an "ABS Only" calibration, this renders null and void approval, as indicated in appendix 9 of regulation ECE13H.

The converter will have to put a well visible warning sticker on the dashboard that the ESP has been disabled. The converter must point to the changed handling characteristics of the vehicle.

Proposed location of the warning sticker

3.1.7 MAXIMUM LENGTH, WIDTH AND HEIGHT

For the maximum basic values for conversion, see also chapter 2.1.

Attention:

The converter must indicate the position of the centre of gravity of the conversion added with the available payload for respecting the max. front and rear axle and front axle system technique (see table of weights).

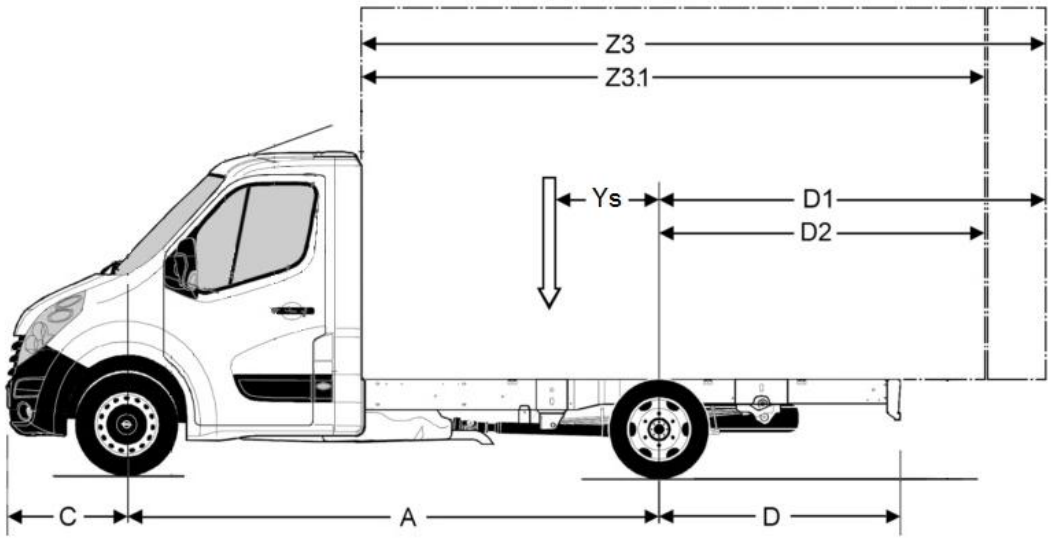
On the **"front wheel drive" versions**, the basic values to be taken into account for the length conversions are **D1, Z3** and **Ys**.

- Exceeding values D1 and Z3 is at the entire responsibility of the coach builder.
- The Ys value must not be exceeded (limit position) of the centre of gravity of the loaded conversion)

On the **"rear wheel drive" versions**, the basic values to be taken into account for the length conversions are **D2, Z3.1** max. and **Ys**.

- Values D2 and Z3.1 must not be exceeded
- The Ys value must not be exceeded (limit position) of the centre of gravity of the loaded area).

The Ys dimension is positive when the centre of gravity of the loading is located in front of the rear axles



3.1.8 REQUEST TO RECALIBRATE THE ESP / ABS OPTION

A converter wishing to recalibrate the ESP must fill in the attached form (4 pages) and contact Opel/ Vauxhall.

1/ ➔ Contact Opel/ Vauxhall Dealer for the request for recalibration.

2/ ➔ Send a copy to: coc.data@de.opel.com

OPEL/ VAUXHALL Model
(EEC type: XXX, Version Variant Type: XXXXXX)
and
Chassis No.: WOLXXXXXXXXXXXXXX

I, the undersigned, _____ certify that I am the designer of the vehicle conversion:

(specify the type of body work or layout)

- Type-mines declaration to the DRIRE: MOD MINE TYPE
- Description of the conversion (give a brief description and the characteristics of the conversion)

Observe the recommendations permitted by the entire profession and more particularly the technical and quality specifications defined by Opel Automobile GmbH / Vauxhall, set out below:

– Observe the recommendations defined in the technical guides available on Opel / Vauxhall website.

– Have had all of the tests, inspections and validations conducted to identify the position of the centre of gravity.

– Have verified the impact of the conversion on the correct handling of the vehicle.

To this end:

I acknowledge that I am explicitly **requesting recalibration of the ESP and solely responsible** in the event of a design, information or manufacturing defect, failure to observe the Opel Automobile GmbH / Vauxhall recommendations, and/or non-compliance of the conversion for any damage occurring on the name **vehicle** or to any other goods, likewise for any material, immaterial and/or personal injury occurring to any individual whomsoever, indirect damage being expressly excluded.

Converter confirms the following:

1. **For purposes of a Conversion of the vehicle referred to above, Converter intends to modify the programming of the ESP system.**
2. **Converter has accurately defined the position of the center of gravity of the vehicle. Converter is fully aware of the effects caused to the vehicle driving behavior by the Conversion and the modified programming of the ESP system.**
3. **Neither Opel Automobile GmbH / Vauxhall nor its affiliates have performed a technical review of the Conversion.**
4. **Converter agrees to fully indemnify and hold Opel Automobile GmbH / Vauxhall and General Motors LLC as well as their respective subsidiaries, affiliates, officers, directors, employees and authorized distributors and repairers harmless of any claims raised by third parties which are by any means directly or indirectly attributable to the Conversion and/or the modified programming of the ESP system. This indemnification includes, but is not limited to, any product liability claims.**

If the conversion applied to the vehicle takes the vehicle's centre of gravity outside the capacity volume defined in the Conversion Manual**, optimal operation of the ESP can no longer be guaranteed.

In this case, it is recommended to replace the existing calibration with an "ESP Off" calibration. If this is not done, the ESP will not correct trajectory deviation or they system may operate in an unpredictable manner.

WARNING:
When the standard calibration is replaced by an “ESP Off” calibration, this renders null and void approval, as indicated in appendix 9 of regulation ECE13H.

1) Identification of the technical vehicle parameters:

Vehicle Type	X*	Traction	X*	Engine + Gear box	X*
Panel van		Front wheel drive		M9T - turbo 100/125/150 PS	
Platform single cab		Rear wheel drive/ rear single wheel		M9T – Bi turbo 135/165 PS	
Platform double cab		Rear wheel drive/ rear twin wheel		Gearbox manual	
Platform cab				Gearbox Easytronic	
Combi					
Bus					

GvW	X*	Wheelbase	X*	Height	X*
2,800kg		E1 = 3,182mm		H1 = 2,303mm	
3,000kg		E2 = 3,682mm		H2 = 2,502mm	
3,300kg		E2´ = 4,008mm		H3 = 2,749mm	
3,500kg/ 3,850kg/ 3,900kg		E3 = 4,332mm			
4,500kg					

X = Check the box corresponding to the type of conversion made to the vehicle*

2) Identification of the parameters affecting the ESP's operation:

Conversion type	X*	Conversion type	X*
Wheelbase modification		Modification of wheel assembly	
Track modification		Modification of rear brakes (callipers, discs, pads and brake hoses)	
Ground clearance modification		Body stiffness modification	
Modification of the front shock absorber characteristics		Modification of the power steering	
Modification of the rear shock absorber characteristics		Modification of the steering wheel	
Modification of the front axle (including springs, stops, technology type)		Modification of the engine calibration	
Modification of the rear axle (including springs, stops, technology type)		Positioning of the centre of gravity outside the defined volume	
Other conversion (please specify)			

X = Check the box corresponding to the type of conversion made to the vehicle*

3) Calibration requested:

Enter the VIN(s) of the vehicle(s) with the requested calibration reference. For the appropriate code, see chapter 3.1.7.

Requested type of calibration	X*
ESP OFF	
ABS only	
Other (Please define)	

X = Check the box corresponding to the type of conversion made to the vehicle*

VEHICLE IDENTIFICATION NUMBER (VIN)	Requested calibration code

Completed at , on

Coach builder (signature and stamp)

3.2 OPENING PANELS

3.2.1 AUTHORISED WEIGHTS

The addition of weight on the doors is tolerated within the following limits.

Attention:

Conversions and extensions on doors may not affect the travel.

Sliding door

- no additional weight if glass door with sliding window
- up to 4 kg if glass door, without sliding window
- up to 10 kg if panel door and providing that the insulation has been removed

Rear swing doors

Weight per door:

- up to 3.5kg if glass door
- up to 10kg if panel door (without exceeding 5kg on the upper area: defined by a horizontal centre in relation to the 2 door hinges).

Attention:

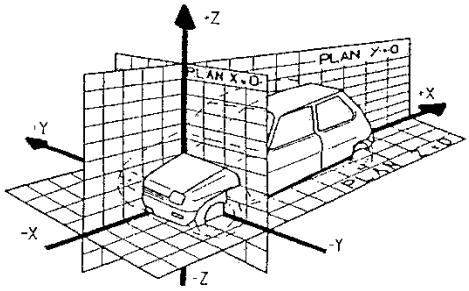
- On the rear swing doors the effect of the additional weight is more critical in the upper part of the doors.
- If there are ladder type accessories, then their weight must be deducted from the above-mentioned recommendations.

3.2.2 ALIGNMENT OF DOORS

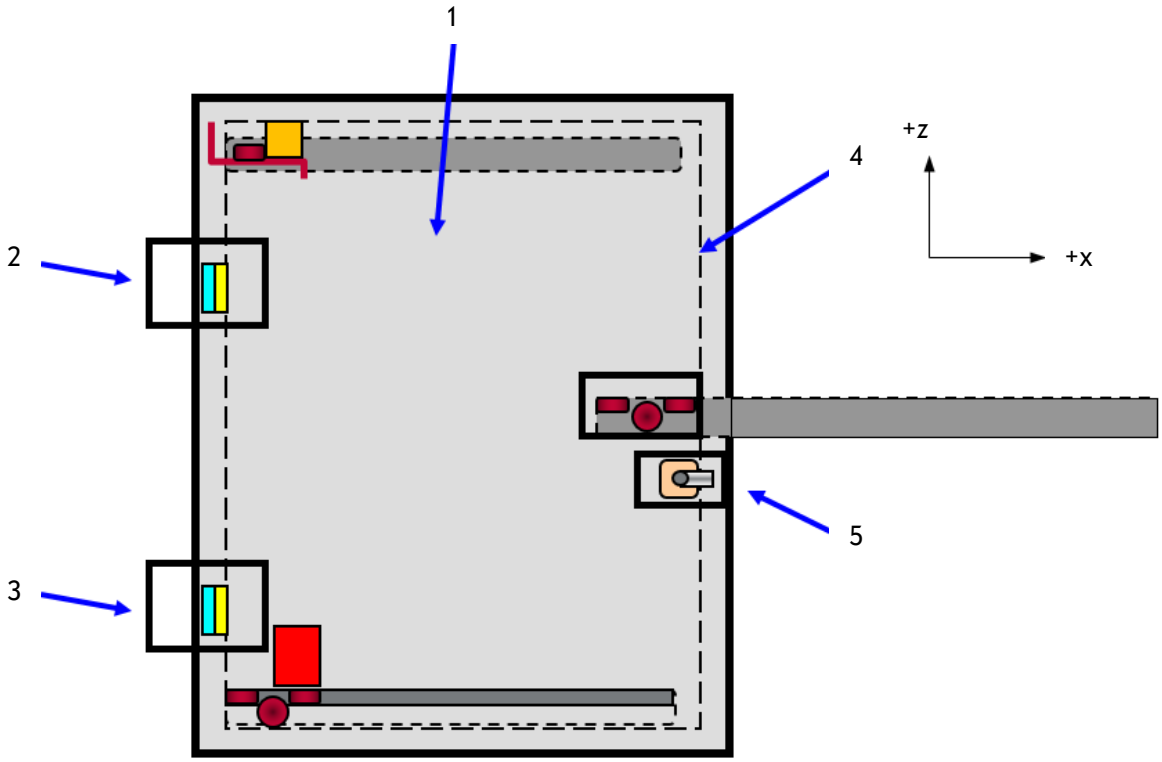
Sliding door

Setting geometry of the sliding door is based on two isostatisms.

The alignment of the left sliding door is completely symmetrical to the one on the right.

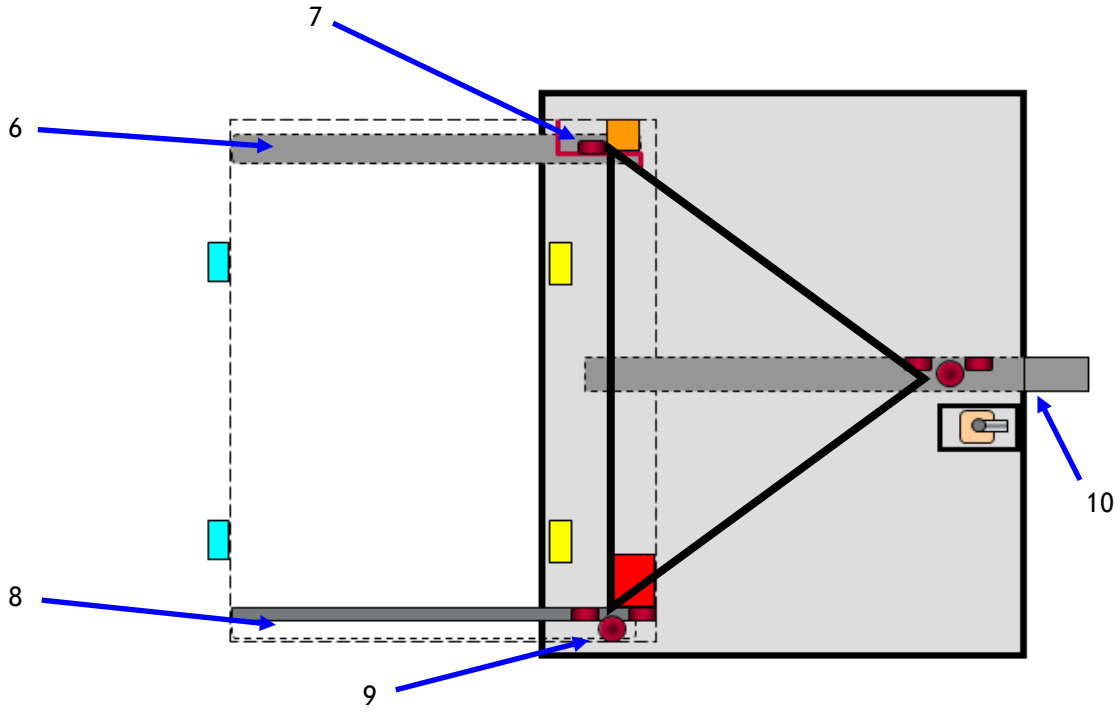


Door closed



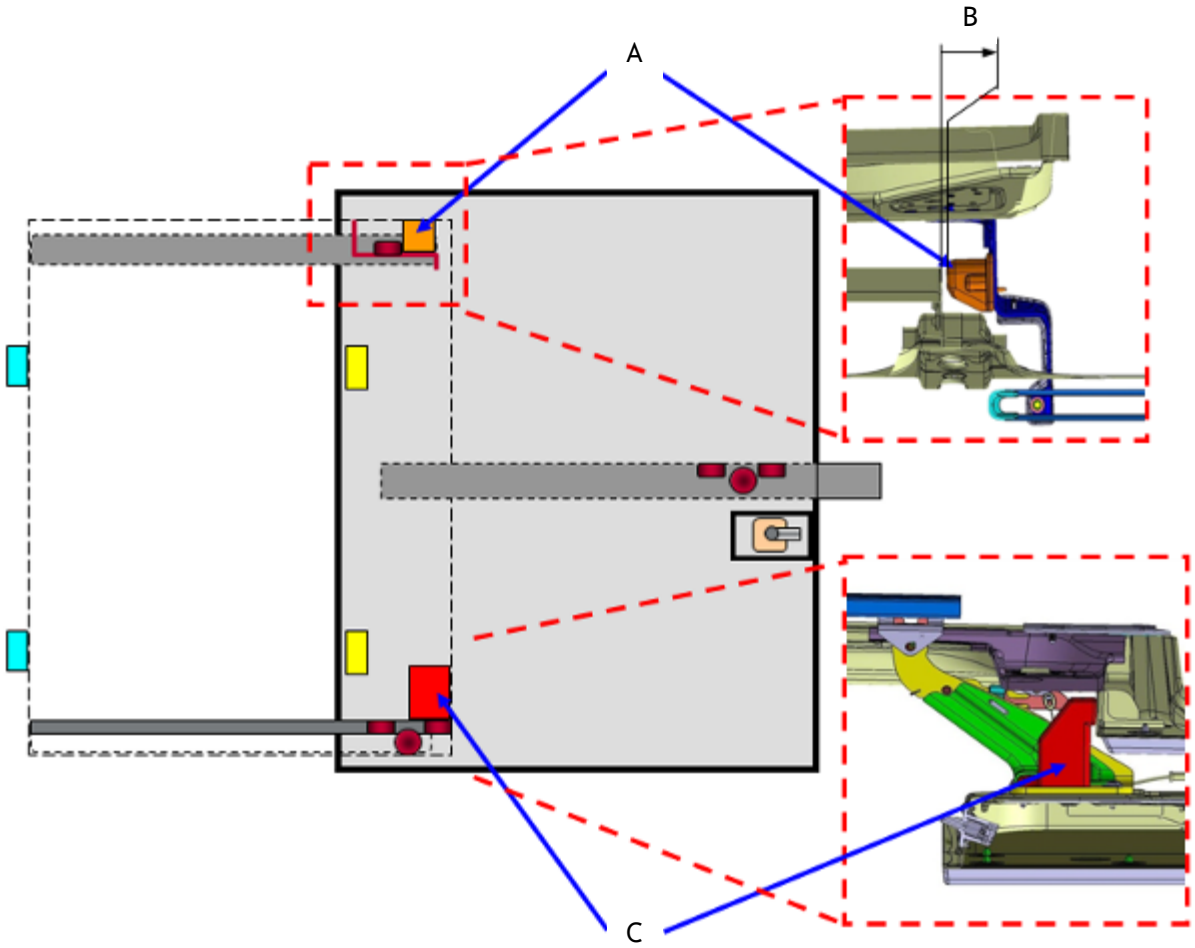
		Functions		Coordinate system vehicle		
		Carrier	Guide	X	Y	Z
1	Sliding side door					
2	Top centring devices		X		X	
3	Bottom centring devices	X	X		X	X
4	Central trolley	X	X		X	X
5	Latch/striker				X	X

Door open



		Functions		Coordinate system vehicle		
		Carrier	Guide	X	Y	Z
6	Top rail		X	X		
7	Guide superior		X	X		
8	Bottom rail	X	X		X	X
9	Bottom guide	X	X		X	X
10	Central rail	X	X		X	X

Action/ Reaction of the stops



A	Secondary anti-rotation stop
B	Required clearance with side of panel
C	Main stop, contact stop to the panel

Attention:

- **It is forbidden to add end-of-travel stops in the various rails of the sliding door (top, central, bottom).**
- **It is recommended that the support areas of the stops be kept identical to the original. If not, a complete study must be carried out (kinematics, dimensioning).**

Rear swinging doors

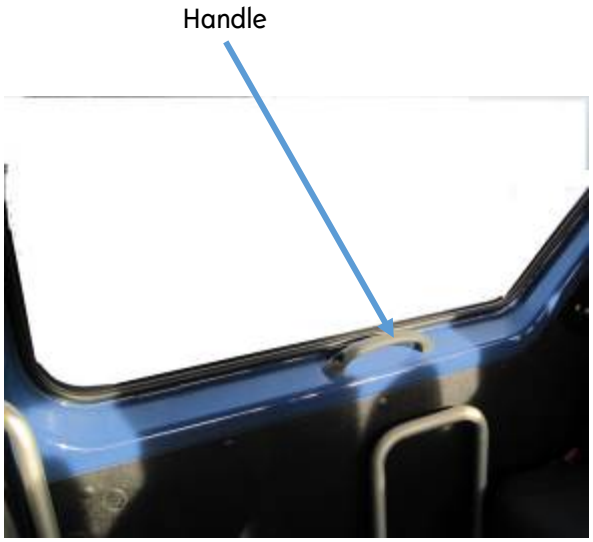
See chapter 2.2.2 – Rear side doors, travel and dimensions.

Front doors

The hinges are not designed to serve as end-of-travel stops.

3.2.3 ADDITION OF INSIDE HANDLE ON SLIDING DOOR

It is possible to add a gripping handle available from Opel/ Vauxhall after-sales department.



Its longitudinal position may be adjusted as requested.

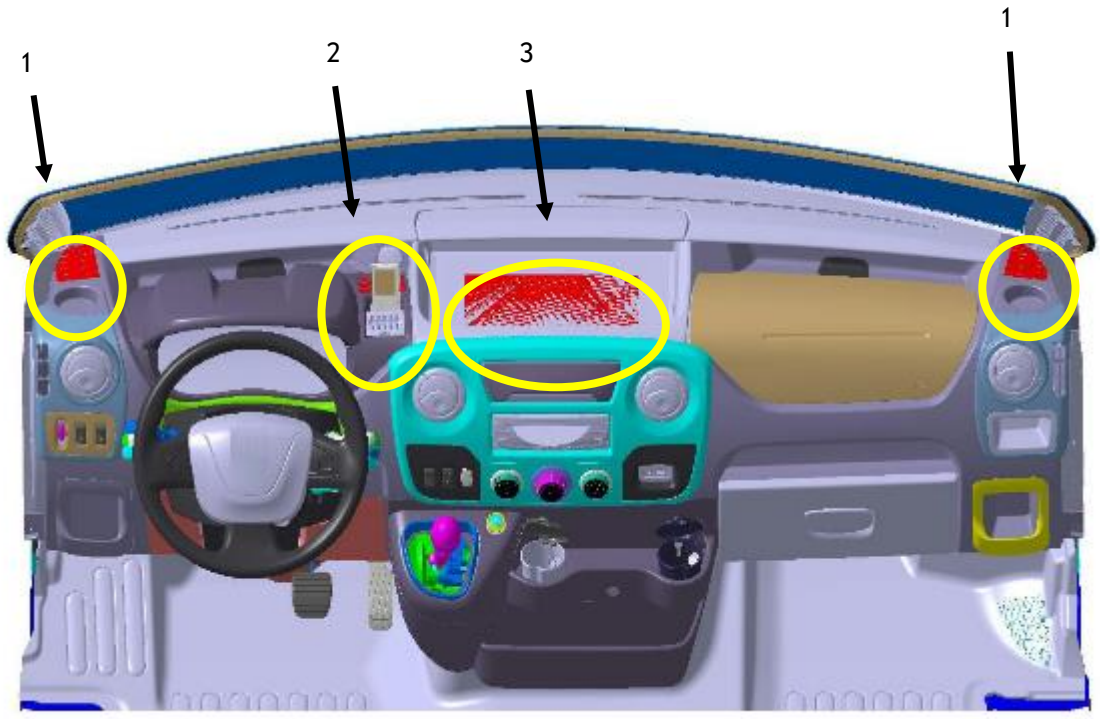
The handle fixing holes must be drilled.

3.3 DASHBOARD

Equipment can be installed on the dashboard in the zones indicated below. The vehicle interior must be designed in such a way that airbags can fully deploy without impediment.

Please also see chapter 3.4.

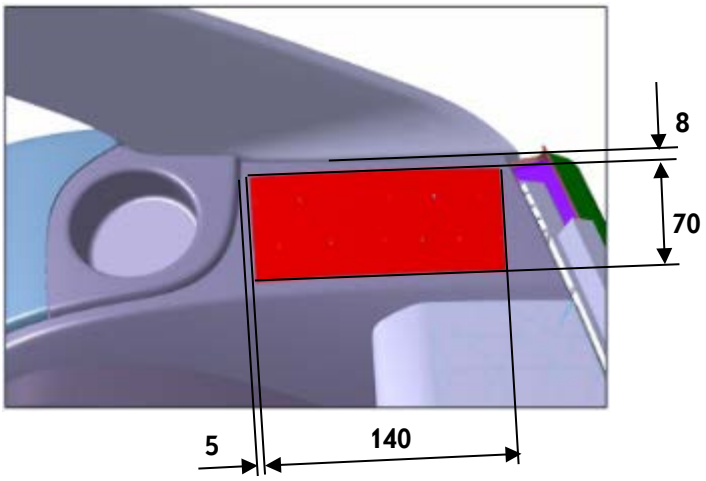
Location of installation and attachment zones (yellow circles)



Warning:

- **Keep the area in which the airbag inflates clear of obstructions.**
- **Do not stick anything on the airbag covers and do not cover them with other materials.**
- **Depending on the version and options, the central area may be smaller due to a door or removable shelf being fitted.**
- **It is forbidden to make modifications to the cross girder of the dashboard, as this element is part of the vehicle structure.**

LATERAL ZONES (1)

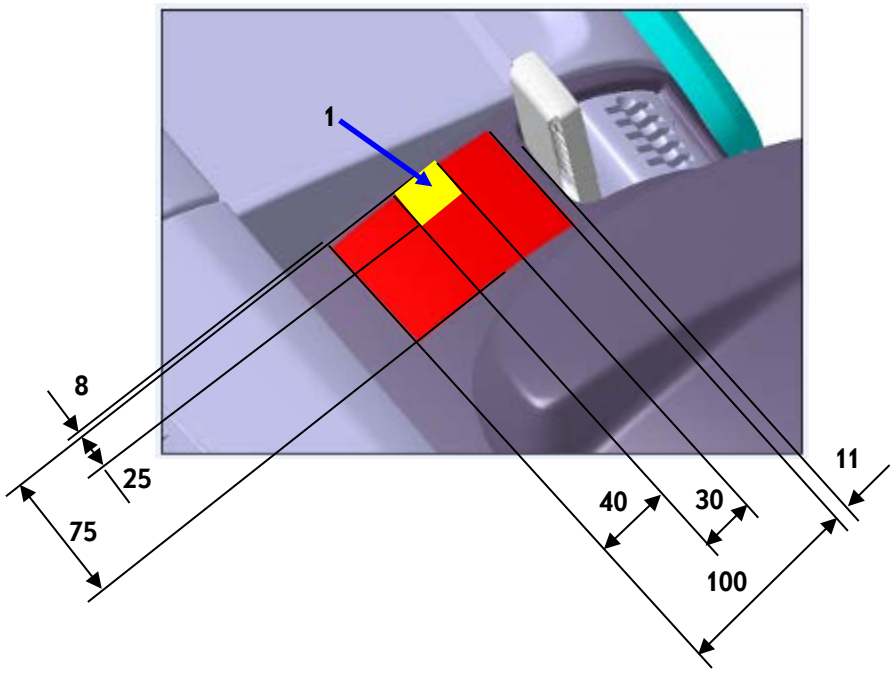


All values in millimetres

Attention:

– The drilling and attachment depth must not exceed 12mm.

ZONE BEHIND THE MOBILE PHONE DOCK (2)



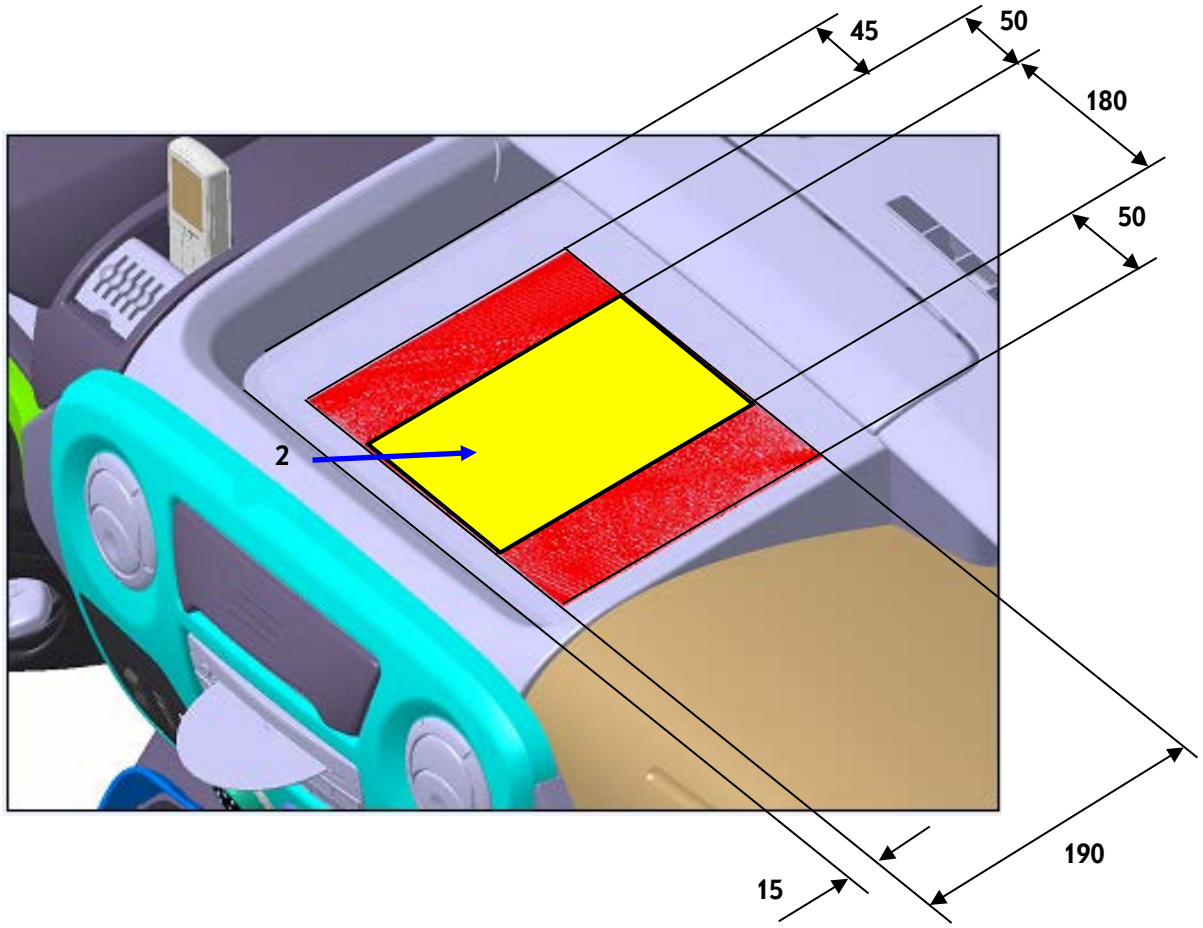
All values in millimetres

Attention:

– The drilling and attachment depth must not exceed 25mm.

– 1 = prohibited zone

CENTRAL AREA (3)



All values in millimetres

Attention:

- The drilling and attachment depth must not exceed 25mm.
- 2 = Prohibited zone if folding shelf fitted.
- If a cover is fitted, the effective height is restricted to 40mm.

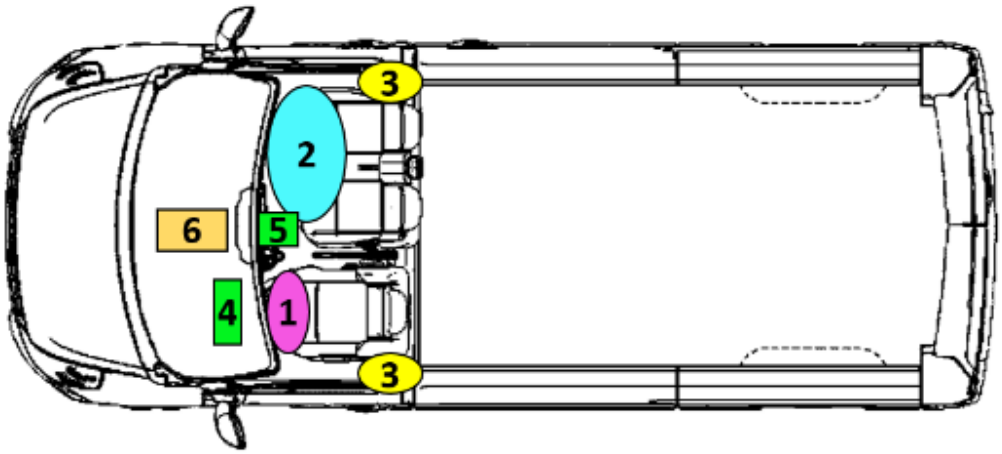
3.4 AIRBAGS

The airbag system consists of a number of individual systems depending on the scope of equipment. The passenger airbag is supplied as an option and it may be deactivated. For more information, also see chapter 4.1.2 and general conversion recommendations.

Warning:

- **Keep the area in which the airbag inflates clear of obstructions. Do not stick anything on the airbag covers and do not cover them with other materials, also see chapter 3.3.**
- **On no account may any modifications be made to the airbag system or the belt tensioner system. Modifications to or work incorrectly carried out on a restraint system (seat belt and seat belt anchorages, belt tensioner or airbag) or its wiring, can cause the restraint systems to stop functioning correctly, e.g. the airbags or belt tensioners could be triggered inadvertently or could fail in accidents.**
- **Vehicle parts that create vibrations must not be secured in the proximity of the airbag control unit or sensor installation locations. Reliable operation of the front airbag, side airbag and belt tensioners is otherwise no longer guaranteed.**

Location of airbag and restraint systems components in the vehicle



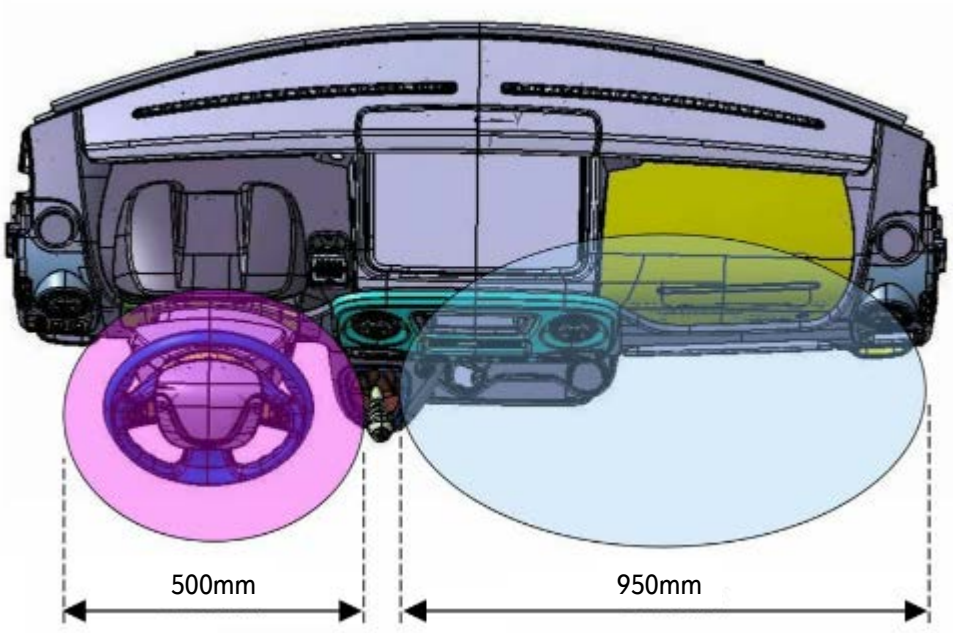
Pos.	Description
1	Driver airbag
2	Passenger airbag
3	Side airbags
4	Warning light (in instrument cluster)
5	Airbag deactivation light (on roof console)
6	Airbag control unit (ECU)

Note:

For more information, also see chapter 4.1.2.

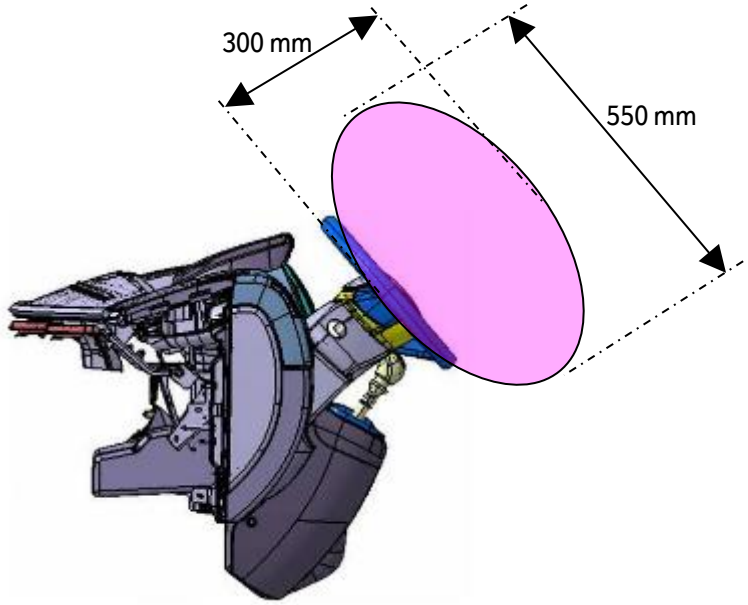
Front airbags

Driver and passenger airbag



Driver airbag

Deployment area of the driver airbag

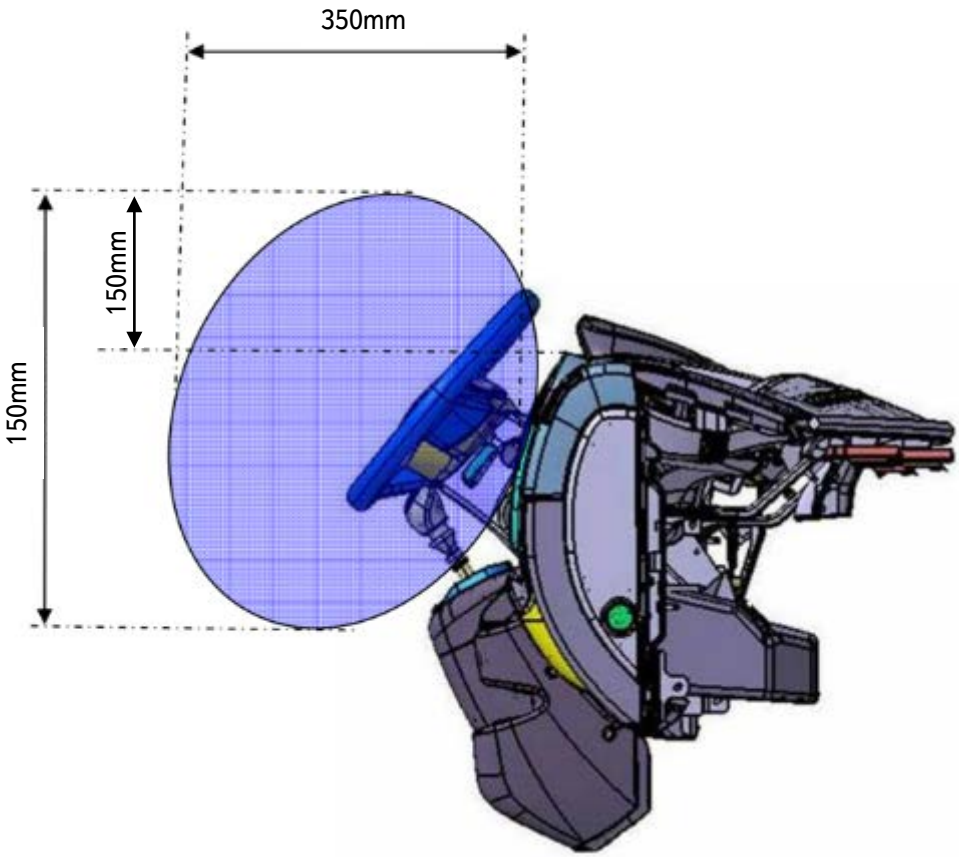


Warning:

– **The steering wheel is reach-adjustable. The adjustment of the steering wheel must be taken into account.**

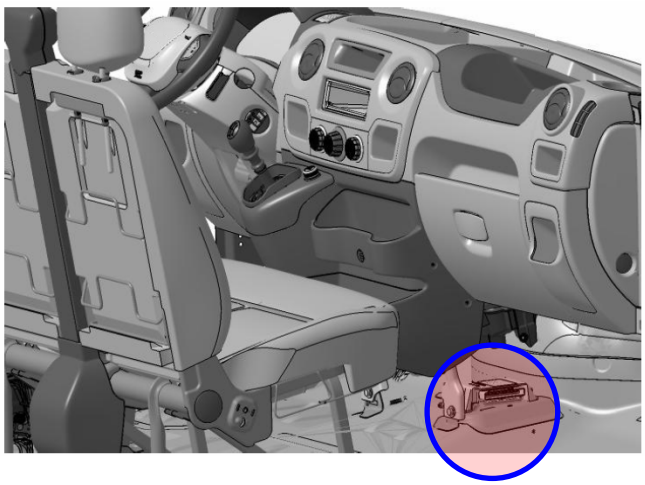
Passenger airbag

Deployment area of the passenger airbag



Airbag control unit

Location of airbag control unit



Note:

The ECU is in the same position for both left- and right-hand drive vehicles.

DEACTIVATION OF AIRBAGS AND SEAT BELTS PRETENSIONERS

Depending on the customer's requirements, an airbag or seat belt pretensioner may need to be deactivated. This can be done using the Opel/ Vauxhall diagnostics tool in the Opel/ Vauxhall dealer network.

After modification, the vehicle must still comply with the legislation and standards in force in the country of sale.

The customer must be notified of any modifications.

Note:

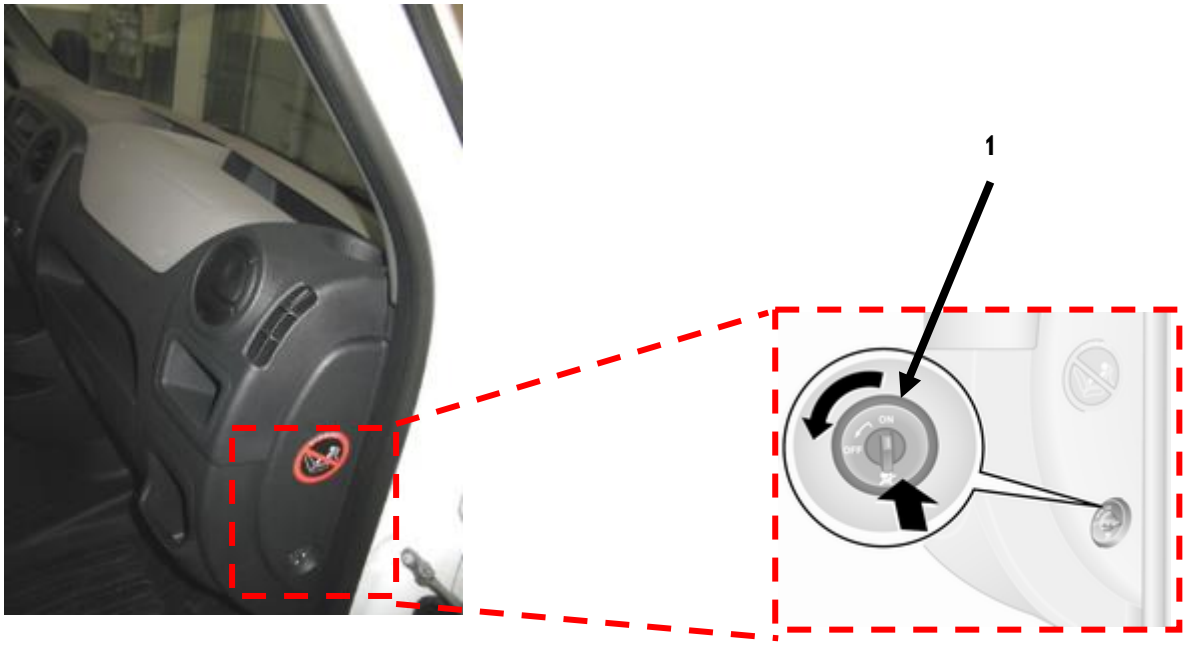
An airbag or pretensioner that has been deactivated can be reactivated at any time. Retrofitting on an airbag is not possible.

Front airbag and side airbag systems for the front passenger seat have to be deactivated if a child restraint system is to be fitted on this seat. The belt pretensioners and all driver airbag systems will remain active. The front passenger airbag system can be deactivated via a switch on the side of the instrument panel.

With the front passenger door open, press switch in and rotate anticlockwise to the **OFF** position.

Front passenger seat airbags are deactivated and will not inflate in the event of a collision. Control indicator illuminates continuously in the information display:

Temporary deactivation of the passenger airbag



Pos.	Description
1	Switch to deactivate the passenger airbag

CHANGE DESCRIPTION

Date	*Chapter*	*Major Changes*
Aug. 18	1.9.3	Added picture of rear axle of panel van with rear-wheel drive
Aug. 18	1.12.1	Torque changed to 19.5 Nm for "Attachment of seat runners to the driver's seat podium..."
Aug. 18	1.12.3	In table way no. 5 the name changed to "Way 5 (*MAM*) "
Aug. 18	1.13	Changed text in "Note".
Aug. 18	1.15	**NEW** - Chapter about WLTP added.
Aug. 18	2.1	**NEW** – Dimensions of dropside ex Opel plant
Aug. 18	2.3.3	In the table " CREW CAB CHASSIS WITH SCR" the Vehicle variants changed. 1. PRJ- *E3P2* EuroVI D2/ D2+/D3 3,5t 2. PRJ- *E3P2* EuroVI D2/ D2+/D3 4,5t
Aug. 18	2.4.3	Text added and moved from chapter 2.4.2 to 2.4.3
Aug. 18	3.1.1	From Note, the following items have been deleted: - *The installation of a lift tailgate* - *The installation of a platform on this overhang*
Aug. 18	3.1.4	In table some technical terms revised
Aug. 18	3.1.5	Text and note revised: - ESP, the position of the centre of gravity must remain with the limits of the V marker, *regardless of the load* of the converted vehicle. - The Z dimensions are measured *in relation to the ground.*
Oct. 17	3.1.8	Change of the name from "Adam Opel GmbH" to "Opel Automobile GmbH".
Apr. 17	1.6	Update: Fixing of roof rack
Apr. 17	1.9.1	Added additional information to the note
Apr. 17	2.1	Dimensions: change in line Z4 = "center of gravity" for chassis with rear wheel drive
Apr. 17	3.1.4	Comment changed: Outside area "V": see chapter 3.1.5
Apr. 17	3.1.7	picture added
Apr. 17	3.1.8	Change of the name from "Adam Opel AG" to "Adam Opel GmbH".
Feb. 16	1.2	Engine range: SCR added. → EURO6
Feb. 16	1.10	Fuel supply system: return of fuel pump and fuel injector added.
Feb. 16	1.11	Exhaust system with SCR added. → EURO6
Feb. 16	1.13	Mirrors: note added for vehicles with SCR. → EURO6
Feb. 16	1.14	NEW - SCR-System (Adblue - Urea). → EURO6
Feb. 16	2.1	Section 2.1.2: following dimensions have been modified Chassis cab, L2H1, rear wheel drive - dimensions D2 / Z3.2 modified Chassis crew cab, rear wheel drive - dimension Z4 modified.
Feb. 16	2.3	Maximum axle weights – versions Combi with Euro6 added. Weights for versions with SCR added. → EURO6
Feb. 16	2.4	NEW – Centre of gravity of vehicles with SCR added. → EURO6
Feb. 16	3.1	Section 3.1.4, table "CONVERSION LIMITS WITH ESP" - value modified in column "Comments" and row "Wheelbase" - wheelbase 4006 deleted --> not available - for version bus "Z maxi" value modified - for version panel van L4 rear wheel drive GVW = 3,5t, single wheel.
Feb. 16	3.1	Section 3.1.8 Request for "ESP-OFF" and "Only ABS" calibration added.
Feb. 16	3.2	Recommendation for opening panels – handle on sliding door added.