

INSTALLATION INSTRUCTIONS

Vehicle information:

Make (manufacturer): **Mercedes Benz**
 Model(s): **Vito / Viano 2003 -**
 Type(s): **639**

Towbar information:

Product No (Version): **35321 (A)**
 EC type: **KF255**
 EC approval No: **e11*94/20*4432*02**
 Vertical mass on coupling S: **max. 150 kg** (See vehicle data)
 D -value D: **max. 13.30 kN**
 Weight of towbar: **17 kg**

D -value equals e.g. C = 2500 kg and T = 2962 kg.

Follow also vehicle specified restrictions (see registration document and other data of vehicle).
D -value of towbar must not be exceeded.

D= D -value [kN]

T= Maximum mass of vehicle [kg]

C= Maximum mass of centre axle trailer -
 Vertical mass (S) on coupling [kg]

$$D = T \times C \times 9.81 / ((T + C) \times 1000)$$

$$T = C \times D \times 1000 / ((C \times 9.81) - (1000 \times D))$$

$$C = T \times D \times 1000 / ((T \times 9.81) - (1000 \times D))$$

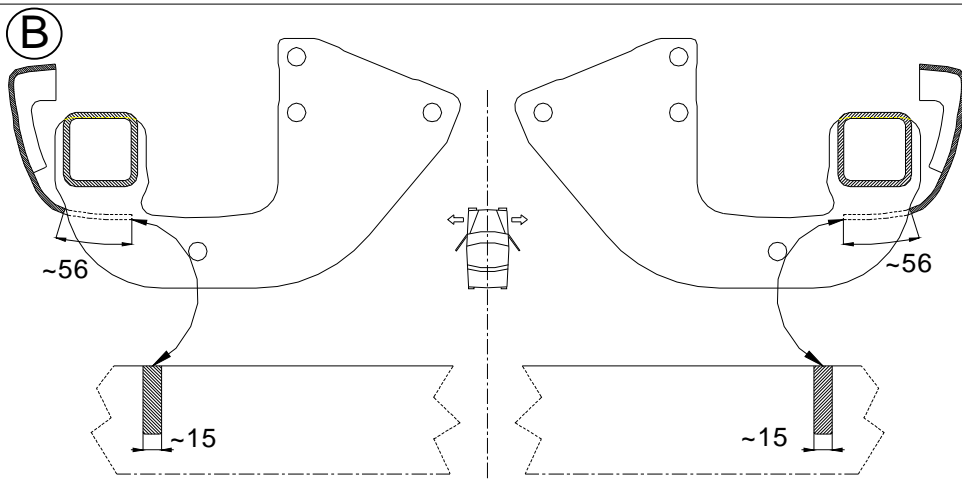
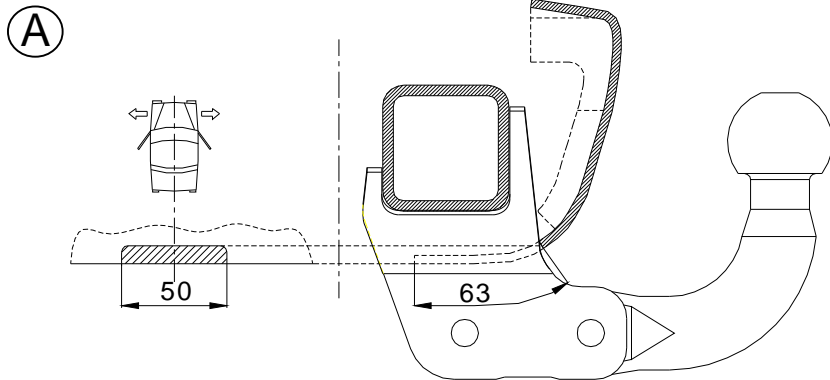
General instructions:

READ INSTALLATION INSTRUCTIONS BEFORE INSTALLING THE TOWBAR!

- Remove underseal or other thick coating on contact area between bodywork and towbar. Treat bare sections (and drilled holes) with thin anti-corrosive coating.
- Clean threads of welded nuts and screws before assembly.
- Installation instructions and other operating and maintenance instructions, if enclosed, shall be kept with vehicle documents.
- Coupling ball must be kept clean and greased.

Notice!

- Constructional changes to towbar or to its assembly are forbidden. Defective towbar must be replaced with a new one together with complete assembly set.
- Smallest diameter of coupling ball must not be less than 49 mm to any direction.
- **Manufacturer's responsibility shall not concern any damage caused by incorrect installation or use of towbar.**



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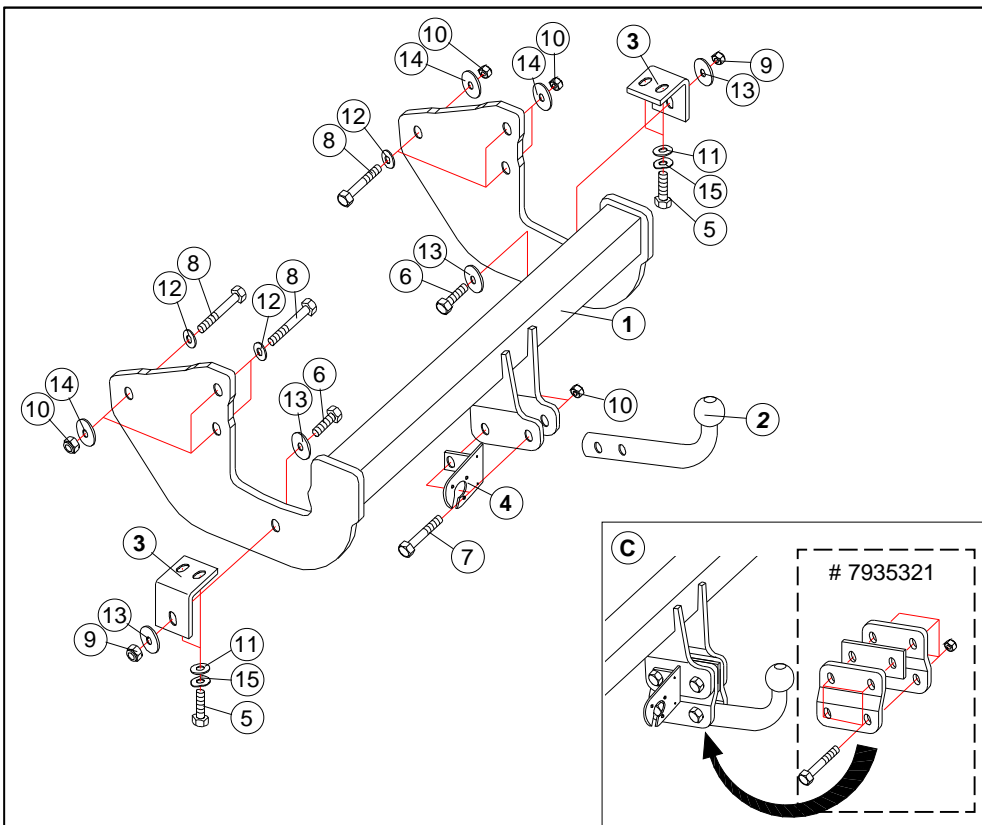
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Installation set:

Pos	Qty	Part
1	1	Cross beam
2	1	Ball part
3	2	Angle plate
4	1	Socket plate
5	4	Screw M10 x 30
6	2	Screw M10 x 35
7	2	Screw M12 x 60
8	6	Screw M12 x 100
9	2	Locknut M10
10	8	Locknut M12
11	4	Washer 10,5 x 20
12	6	Washer 13 x 24
13	4	Washer 11 x 33
14	6	Washer 13 x 36
15	4	Spring washer M10

(C) ... --- Lowering set 7935321 for ball part , can be ordered separately)

Tightening torque:

M6 - 8.8	10 Nm
M8 - 8.8	30 Nm
M10 - 8.8	47 Nm
M12 - 8.8	90 Nm
M14 - 8.8	130 Nm
M16 - 8.8	195 Nm
M10 x 1,25 - 8.8	40 Nm
M12 x 1,25 - 8.8	70 Nm
M12 x 1,5 - 8.8	80 Nm
M14 x 1,5 - 8.8	135 Nm

Notice! Unpack the installation set and check before assembly that all parts are included. For removing parts from vehicle see detailed instructions in workshop manual!

Hint: Follow installation instructions for electric wiring kit and install wires while mounting the towbar.

- Demount spare wheel.
Demount rear bumper and possible cables to it.
Remove collision elements from rear panel at left and right side frame (elements will not be remounted), and remount fixing screws to rear panel.
Remove towing bracket on right-hand side (will not be remounted).
- Mount crossbeam (1) loosely to fixing holes at side frames with screws (8), washers (12) and (14) and nuts (10).
- Vehicles with chassis number up to ...132 224:**
Remove 2 plastic plugs on left-hand side on bottom of vehicle cross frame, and clean nut threads (M10x1,5).
Mount angle plates (3) loosely to nuts on vehicle cross frame bottom with washers (11), spring washers (15) and screws (5).
Mount angle plates (3) loosely to cross beam (1) with screws (6), washers (13) and nuts (9).
Vehicles with chassis number over ...132 224: Angle plates (3) will not be mounted.
- Make a recess to rear bumper according to fig. **A** and **B** and according to cross beam (1).
Remount bumper and possible cables to it.
- Mount socket plate (4) and ball part (2) to cross beam (1) with screws (7) and nuts (10).
A lowering set for ball part can be ordered separately for vehicles with 4WD and/or with elevated chassis, see sketch **C**.
Note: Ball height to ground should be 350-420mm with vehicle's maximum load.
- Align all parts and tighten all screws/nuts carefully to the right torque, see table.
- Remount spare wheel.