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> Assembly material

All -1 and -2 Flexx Rack packages will include at least 1 of each of the following items:

- Prosafe Upright
- Horizontal Frame Traverse, ProSafe
- Heavy Duty Composite Shelf w/Aluminum Lip
- ProSafe Lashing Strap, 117"
- Shelf Hardware Kit 2000003337 (packed inside cardboard end cap of shelf)
- Wall Mounting Hardware Kit 1000004477
- Floor Mounting Hardware Kit 1000004183
- Miscellaneous Hardware

NOTE: Quantities will vary between -1 and -2 Flexx Rack kits.





FLEXXRACK COMPONENTS		
	FLEXX RACK SHELF W/LIP	
	FRAME TRAVERSE, PROSAFE	
100004477	FLEXX RACK FASTENING SET, WALL	
100004183	FLEXX RACK FASTENING SET, FLOOR	
6000000222	LASHING STRAP, PROSAFE, 117"	

NOTE: Misc. Hardware may come pre-installed on the ProSafe Upright and/or included inside the packaging.







FLEXX RACK - MISCELLANEOUS HARDWARE	
71018442	LIGHTWEIGHT LOCATOR NUT (PML)
71003820	SCREW (M6 X 25)
1000002442	ECOFIX BRACKET 265MM
1000002441	ECOFIX BRACKET 165MM
71009864	SPACER (24 X 8.4 X 10)
71008109	SCREW (M8 X 35)
71003987	RIV-NUT (M8 X 29)
6000003228	STRAIN LABEL FLEXX RACK

> Installation material

NOTE: Flexx Rack floor mounting hardware kits are supplied 1 to each vertical upright. The protective cap for the top of the vertical upright is also included in this kit.

1000004183 HARDWARE KIT (1 PER UPRIGHT)			
QTY	PART #	DESCRIPTION	
1	71018442	LIGHTWEIGHT LOCATOR NUT (PML)	
1	6000003154	END CAP FOR UPRIGHT	
1	1000001240	PHILLIPS SCREW (M4.8X13)	
4	71003824	SCREW (M6 X 10)	
2	2000002982	SWIVEL FOOT ANGLE BRACKET	
2	71008313	SCREW (M8X12)	
2	71003989	FLOOR ANCHER (M8)	

NOTE: Flexx Rack wall mounting hardware kits are supplied 2 to each vertical upright. They are used in combination with the EcoFix brackets.

1000004477 HARDWARE KIT (ECOFIX MOUNTING POINTS)			
QTY	PART #	DESCRIPTION	
1	71018442	LIGHTWEIGHT LOCATOR NUT (PML)	
4	71003824	SCREW (M6 X 10)	
2	71003987	RIV-NUT (M8 X 29)	
2	71004867	WASHER (8.4 X 21 X 4)	
2	71005080	COVER CAP, M8	
2	71003988	RATCHET SCREW (M8X20)	

> Tools for Assembly & Installation

TOOLS		
TYPE	DESCRIPTION	
SIZE 2	PHILLIPS SCREWDRIVER, BIT OR SOCKET INSERT	
T40	TORX SCREWDRIVER, BIT OR SOCKET INSERT	
SIZE 4, 5, 8	HEX SCREWDRIVER, BIT OR SOCKET INSERT	
A/F13	OPEN-ENDED OR SOCKET WRENCH	
M8	BLIND RIVET NUT MOUNTING TOOLS	
	CORDLESS SCREWDRIVER	
	FELT MARKER	
	DRILL SLEEVE OR DRILL STOP	
∅ 11MM	WOOD DRILL BIT	
∅ 2.5MM, 11MM	METAL DRILL BIT	
> ∅ 20MM	COUNTERSINK BIT 90°	
801001291	MANUAL BRACKET BENDER OR HAND BENDING DEVICE	

“Installation made easy”

The following assembly instruction manual describes the ideal assembly steps - custom configurations may require specific placement of shelves not shown in this manual.

! Read completely through the installation guide before starting!



Torques for screw fastenings:

M6 with 62 – 71 in-lb

M8 with 177 – 221 in-lb



Tighten securely

NOTE: The torque specs listed here are general guidelines for tightening M6 and M8 bolts and screws. Torque specs for special items are called out in their specific instruction sections.

> Warnings and Precautions

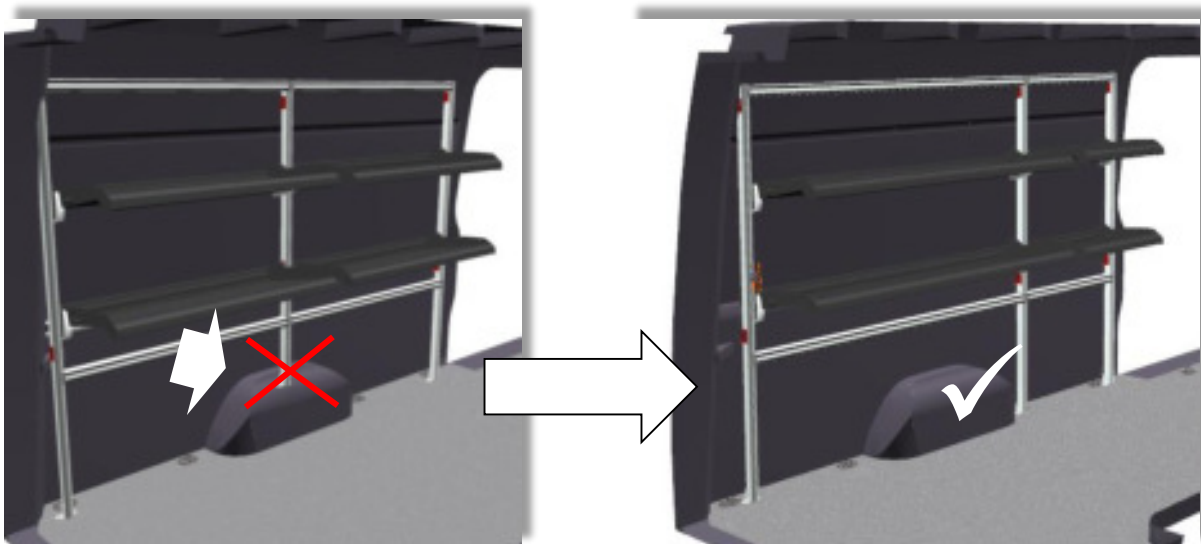


The Flexx Rack should only be installed in vehicles with a cargo partition.



It is not permissible to install the Flexx Rack on top of the wheel housing.

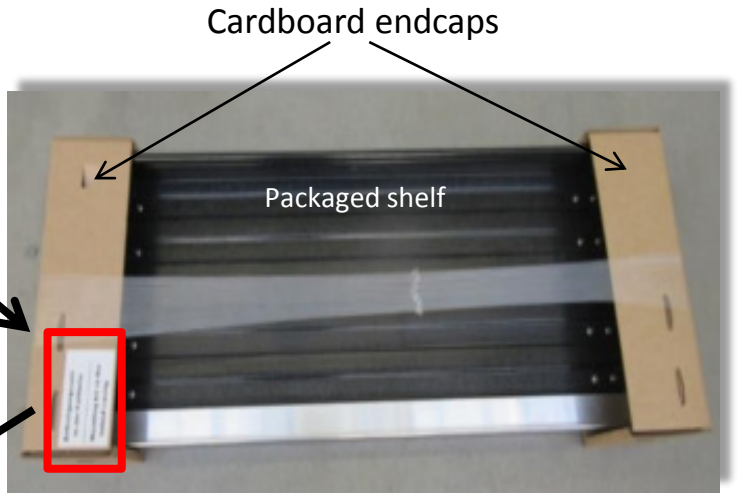
The vehicle manufacturer states that installation is not permissible in the area of the wheel housing. In addition there is no standard fixation for this purpose. Improper installation can lead to oscillations on the wheel housing and to breakage of the framing upright. The result would be the collapsing of the shelf and falling out of goods.



> Packaged Flexx Rack Shelf

NOTE: Shelf hardware kit 2000003337 is packed inside the cardboard endcap.

NOTE: Confirm you have retrieved the hardware prior to disposal of the cardboard packaging.



2000003337 HARDWARE KIT (1 PER SHELF)			
QTY	PART #	DESCRIPTION	
4	71018442	LIGHTWEIGHT LOCATOR NUT (PML)	
4	71003820	SCREW (M6 X 25)	
4	71003824	SCREW (M6 X 10)	
2	1000001594	AMTEC SCREW (M6X16)	
1	6000002963	FXR LEG SPRING, LEFT	
1	6000002962	FXR LEG SPRING, RIGHT	
1	2000010331	SPRING COVER BRACKET, LEFT	
1	2000010332	SPRING COVER BRACKET, RIGHT	
1	2000003197	SHELF BEARING BRACKET, LEFT	
1	2000003196	SHELF BEARING BRACKET, RIGHT	

> Assembling the Flexx Rack: Preparing the uprights

NOTE: The following steps will use hardware kit 1000004183.

NOTE: The exact positioning of the individual mounting parts to the upright is done by the installer. Shelf positions should be communicated at the time of installation.

For custom solutions the corresponding PX5 assembly list will be provided.

1. Attach the end cap cover of the upright front using the self tapping screw.



Self tapping screw
4,8x19z countersunk
71003821

End cap for front
upright 2.0, plastic
6000003154



2. Attach the swivel foot angle brackets with a PML/locator nut and two M6x10 self-locking screws each. At this time hand-tighten only. For more information on attaching the angle brackets refer to page 18.



> Assembling the Flexx Rack: Connecting the Frame Traverse

NOTE: Misc. Hardware may come pre-installed on the ProSafe Upright. Be sure to check for proper positioning of these items prior to connecting the Frame Traverse.

1. Attach the Frame Traverses at the top-most and bottom-most positions (or according to the custom assembly list).



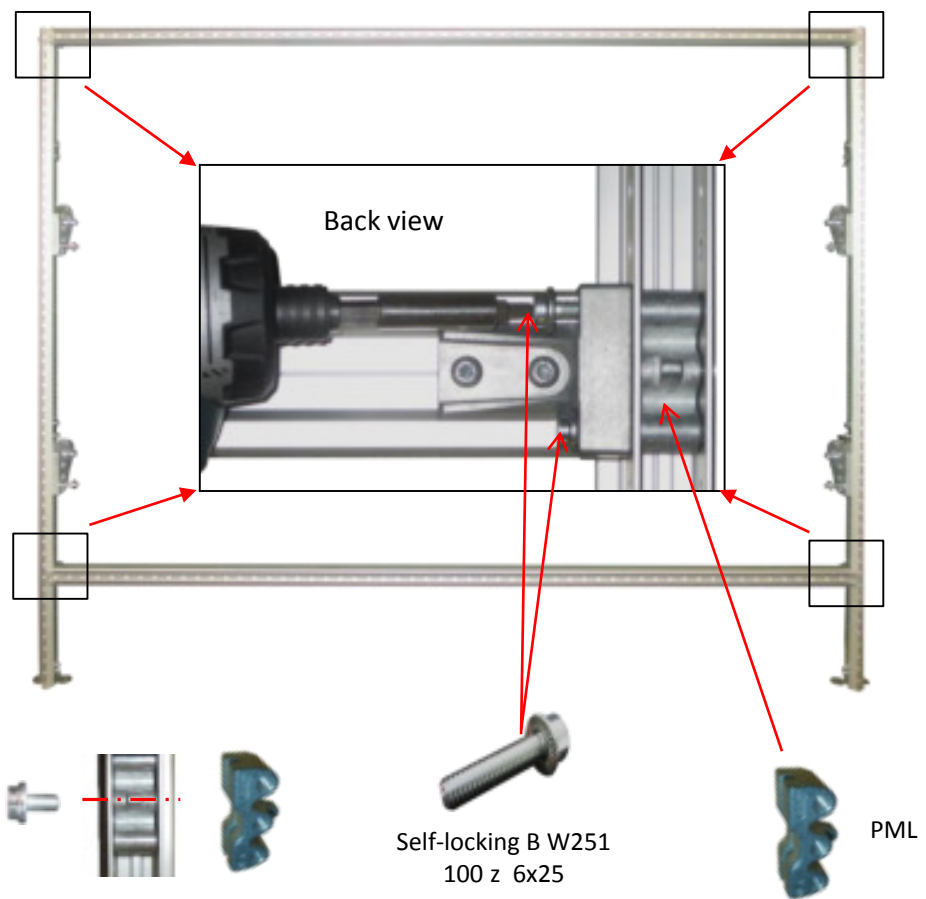
Torque specifications, see page 5.



Tighten securely



4 mm



2. Attach the Frame Traverse to vertical uprights on each side using two self-locking screws M6x25 and the PML/locator nuts. Prevent the PML from slipping by inserting a screw from outside.

NOTE: The position of the bottom frame traverse depends on the position of the lowest shelf and/or wheel house.

> Assembling the Flexx Rack: Mounting the Shelf Bearing Brackets

NOTE: The following step will use the hardware kit 2000003337 contained in the cardboard endcap of the shelf.

Place one self-locking screw through the bearing bracket and into the central hole of each of the PML/locator nuts (2 per bearing bracket).

NOTE: The exact positioning of the individual mounting parts to the upright is done by the installer. Shelf positions should be communicated at the time of installation.

For custom solutions the corresponding PX5 assembly list will be provided.



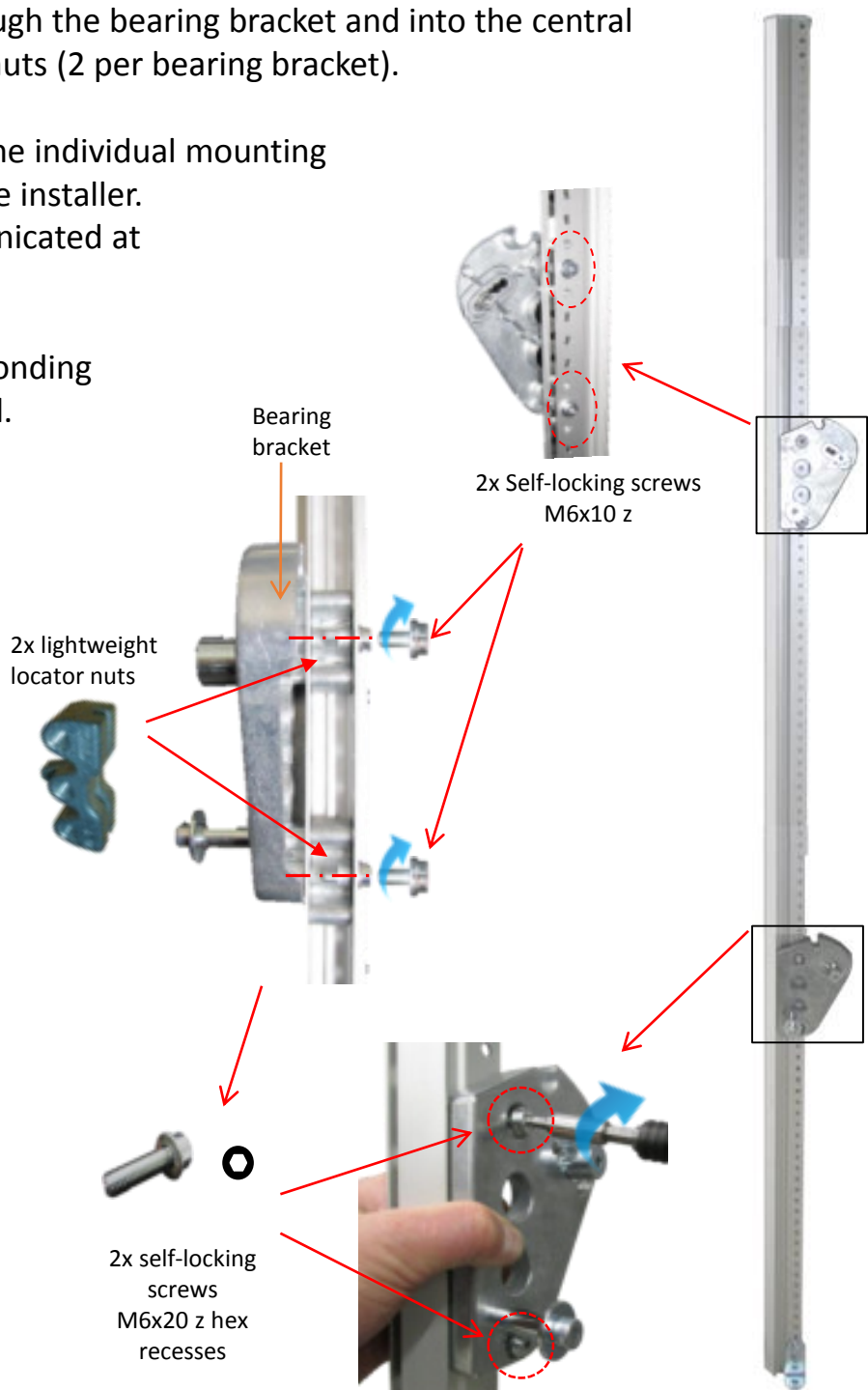
Torque specifications, see page 5.



Tighten securely



4 mm



> Installing the Flexx Rack: Positioning of the Racking

Position the Flexx Rack frame within the vehicle according to package specifications. Temporarily secure the framework to the vehicle side wall using the included ProSafe straps or other method. The framework needs to be held steady in order to maintain its distance from the wall.



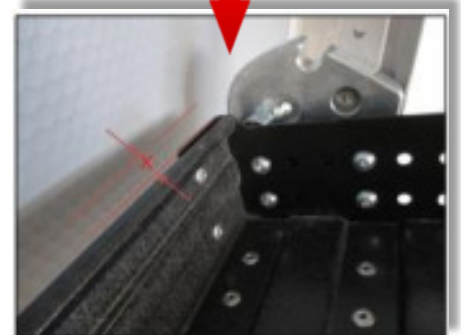
NOTE: For determining the distance of the uprights to the vehicle body, the express shelves need to be mounted in the appropriate position and tilted so that the back edge of the shelf protrudes past the bearing brackets.

Alternatively, position the uprights so they are completely vertical and ensure that the shelf can operate without touching the vehicle wall.

> For more info on shelf mounting please see pages 20-21

NOTE: Additional clearance is necessary when vehicle side wall cladding is present.

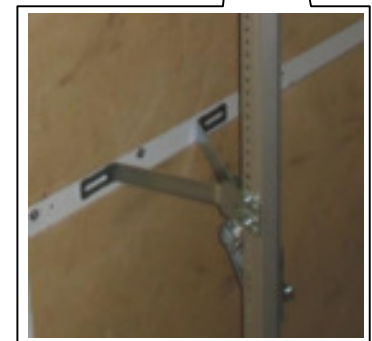
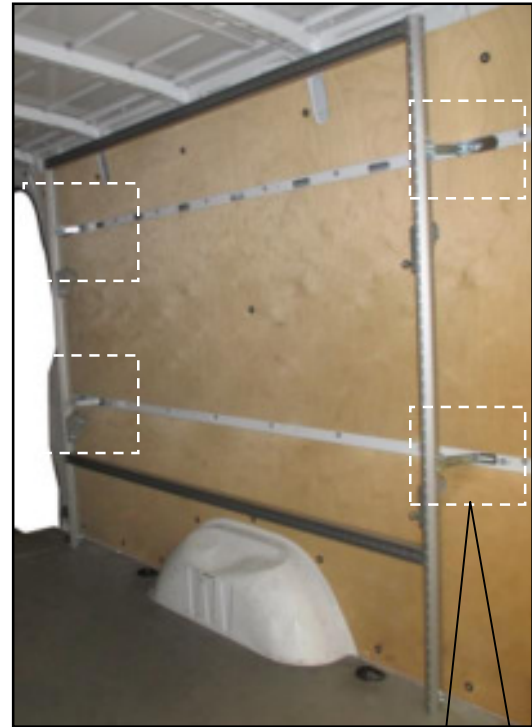
> Adjustment of shelves horizontally – the distance to the vehicle body, see pages 25-26



> Installing the Flexx Rack: Mounting EcoFix Fastening Brackets

Bend the fastening brackets for all fastening positions. 4 fastening brackets per vertical upright: 1 pair positioned near the top and one pair positioned at the middle or near the bottom. At this time attach the EcoFix fastening brackets to the upright hand-tightly.

NOTE: The vehicles horizontal bracing areas are the best areas for mounting EcoFix brackets.



Hand bending wrench for fastening bracket



Fastening bracket

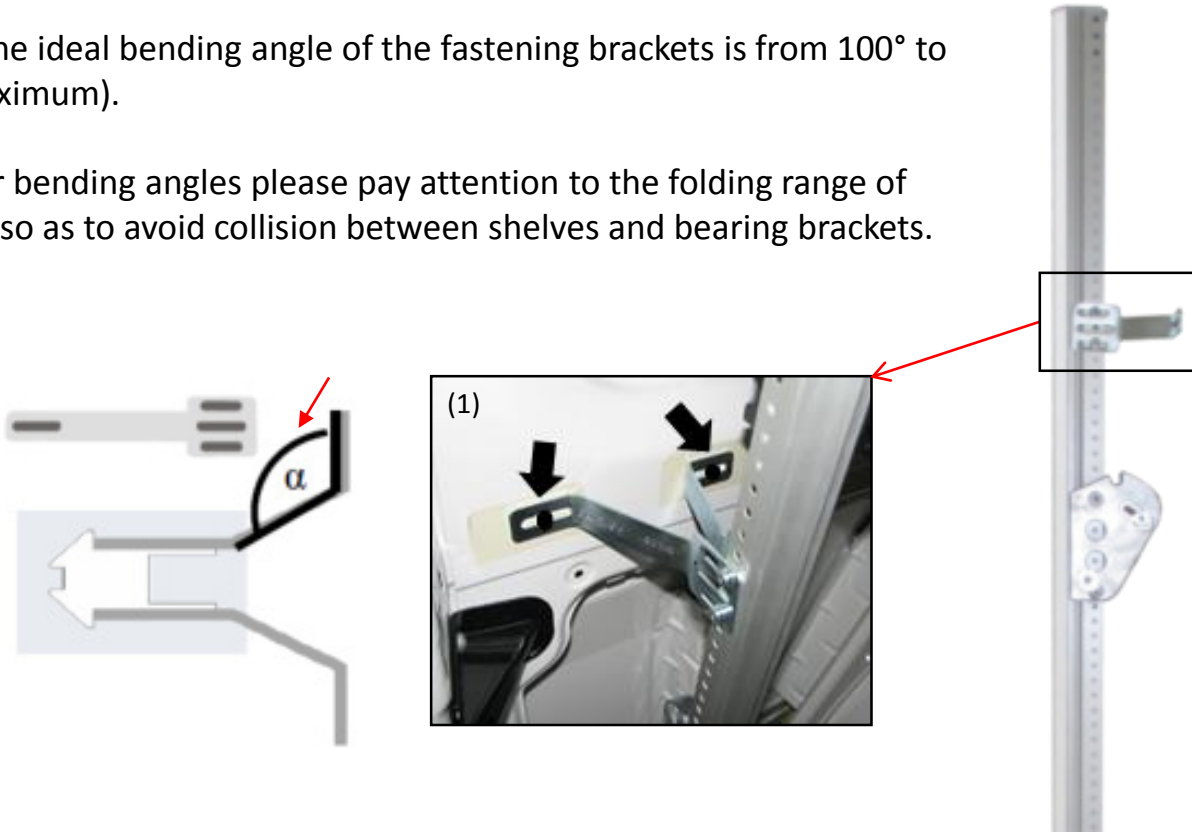
NOTE: Two V-assembly positions have to be attached per upright (2x middle, 2x top). Each fastening bracket is attached to the wall using a blind rivet nut.

> Installing the Flexx Rack: Mounting EcoFix Fastening Brackets Cont.

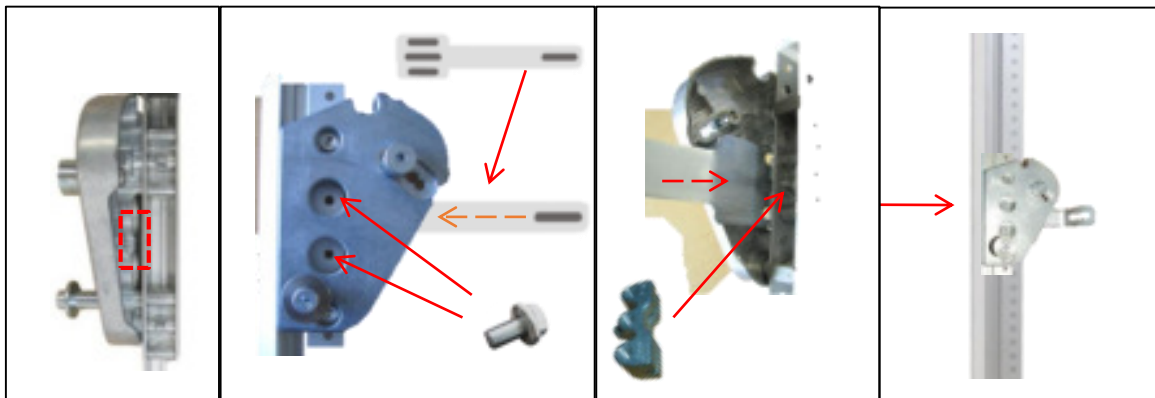
NOTE: 1000004477 Fastening set wall Flexx Rack required.

NOTE: The ideal bending angle of the fastening brackets is from 100° to 120° (maximum).

For larger bending angles please pay attention to the folding range of the shelf so as to avoid collision between shelves and bearing brackets.

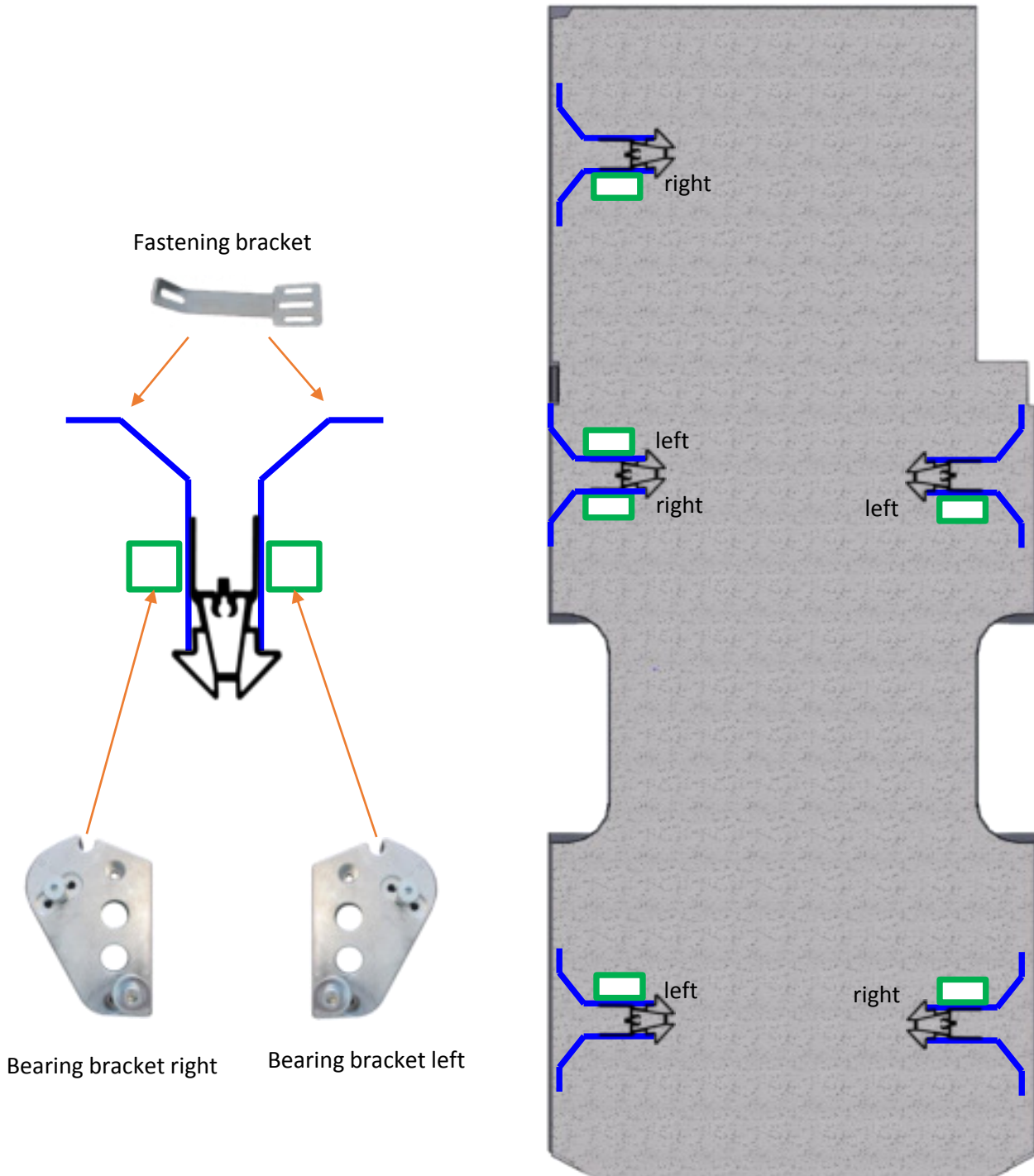


NOTE: When necessary it is possible to attach a fastening bracket to the shelf Bearing Brackets left/right, if the optimal connection point to the car body is made at this position.



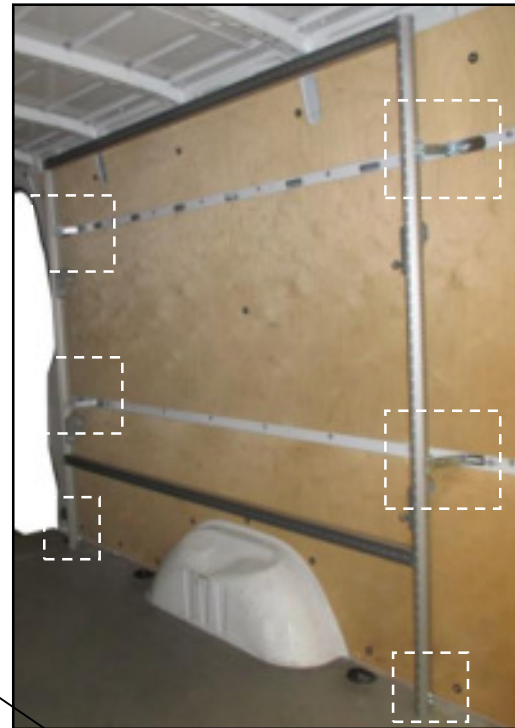
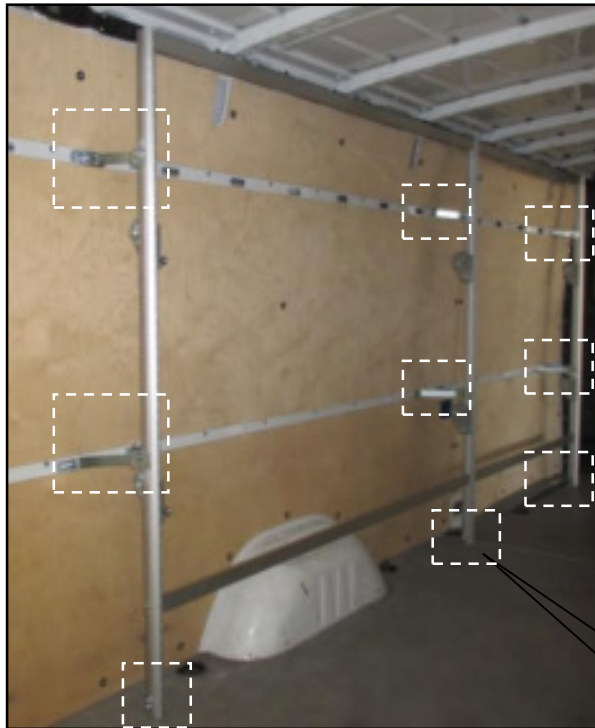
▶ Installing the Flexx Rack: Mounting EcoFix Fastening Brackets Cont.

Schematic illustration of the fastening areas:

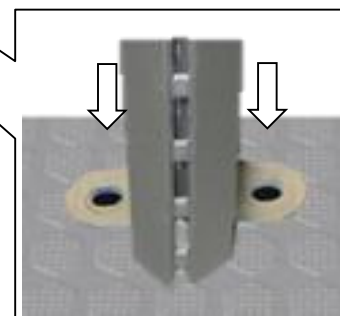


➤ Installing the Flexx Rack: Marking Vehicle Mounting Points on the Floor and Wall

At this step mark all holes necessary for mounting the Flexx Rack and prepare for drilling. After all mounting points are marked move the Flexx Rack aside or, if needed, take the Flexx Rack framework completely out of the vehicle.



NOTE: Mark both sides of the swivel foot angle bracket.



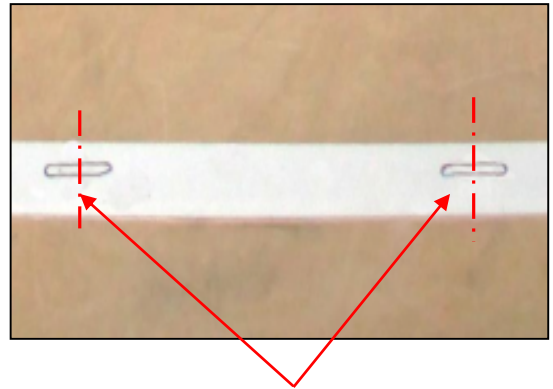
NOTE: Mark all wall boreholes.



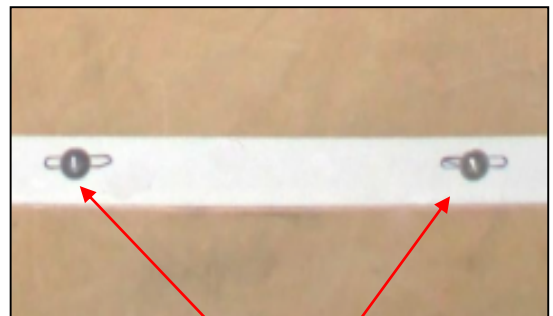
> Installing the Flexx Rack: Inserting the Blind Rivet Nut

Pre-drill all holes using a pilot bit. Then drill out all marked positions on the wall and floor.

NOTE: Use a drill sleeve, drill stop or short bit to prevent damage to outer sheet metal wall!



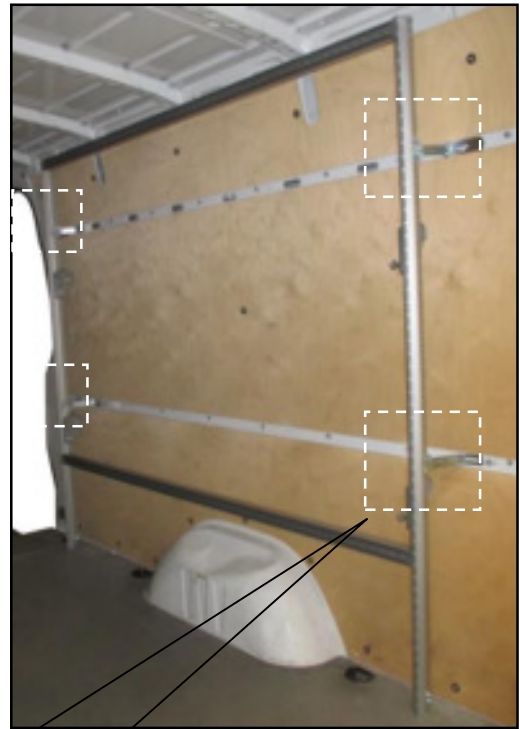
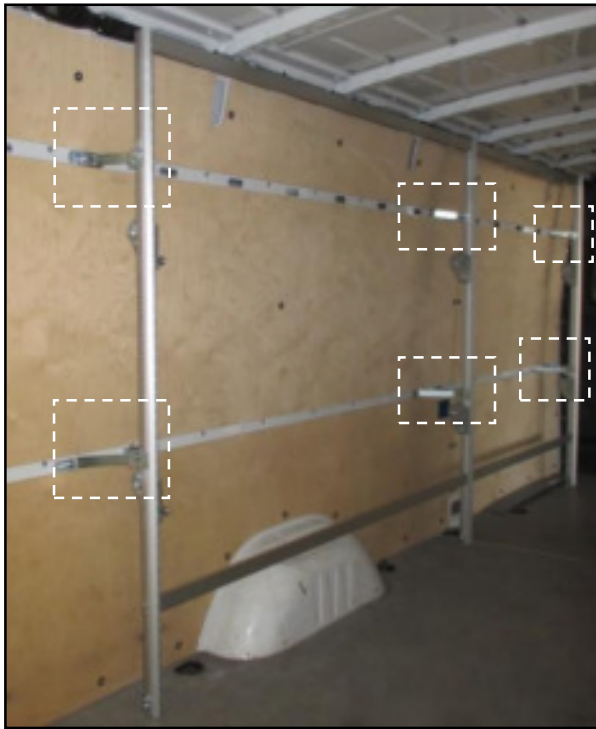
Insert the blind rivet nuts at all drilled positions on the floor and wall.



➤ Installing the Flexx Rack: Positioning the Flexx Rack Framework and Attaching the EcoFix Brackets

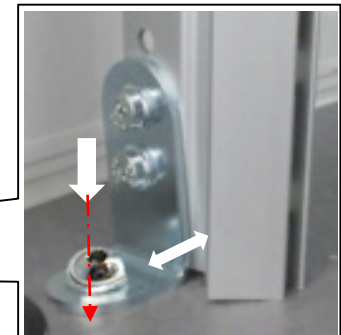
Place the frame of the Flexx Rack into the vehicle again and first connect the EcoFix brackets and blind rivet nuts. Be sure to align the brackets and framework to eliminate any tension.

NOTE: At this time all wall bolts should be hand-tight only (details on fastening see following pages).



> Installing the Flexx Rack: Positioning the Flexx Rack Framework and Attaching Floor Mounts

Using the flanged raised head screw M8x 12, connect the swivel foot angle bracket to the blind rivet nut. Next tightly screw the swivel foot angle brackets to the uprights and PML/locator nuts using the self-locking screws M6x10.



Torque specifications, see page 5.



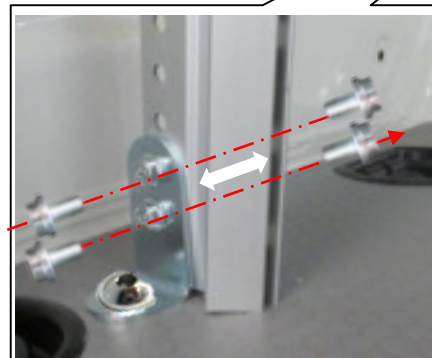
4mm



Tighten securely

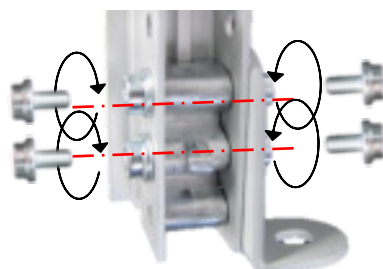
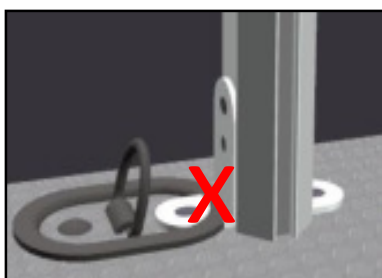


Self-locking screw B W251 100 z 6x10



Back side

NOTE: In general the ProSafe upright always has to be mounted to the floor with two swivel foot floor brackets. If it cannot be avoided, the fixation can be carried out with one swivel foot floor bracket. In this situation two ratchet screws have to be screwed onto the opposite side of the upright. Do not attempt to mount the floor brackets to a D-ring.



4x Self-locking screws B W251 z 6x10

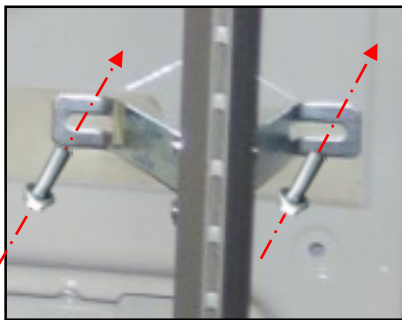


4mm

> Installing the Flexx Rack: Tightening of EcoFix Brackets

Tighten down all fastening brackets to the vertical uprights and vehicle wall and floor.

NOTE: Wall mounts should be tightened first; then tighten EcoFix brackets to the Flexx Rack vertical upright.



Torque specifications,
see page 5.



Tighten securely

> Flexx Rack Shelves: Shelf Assembly

These pages detail the assembly of the Flexx Rack shelves using the included hardware kit **2000002337**. Further adjustments to the shelf height, horizontal distance to the wall and shelf inclination are covered in pages 24-31.

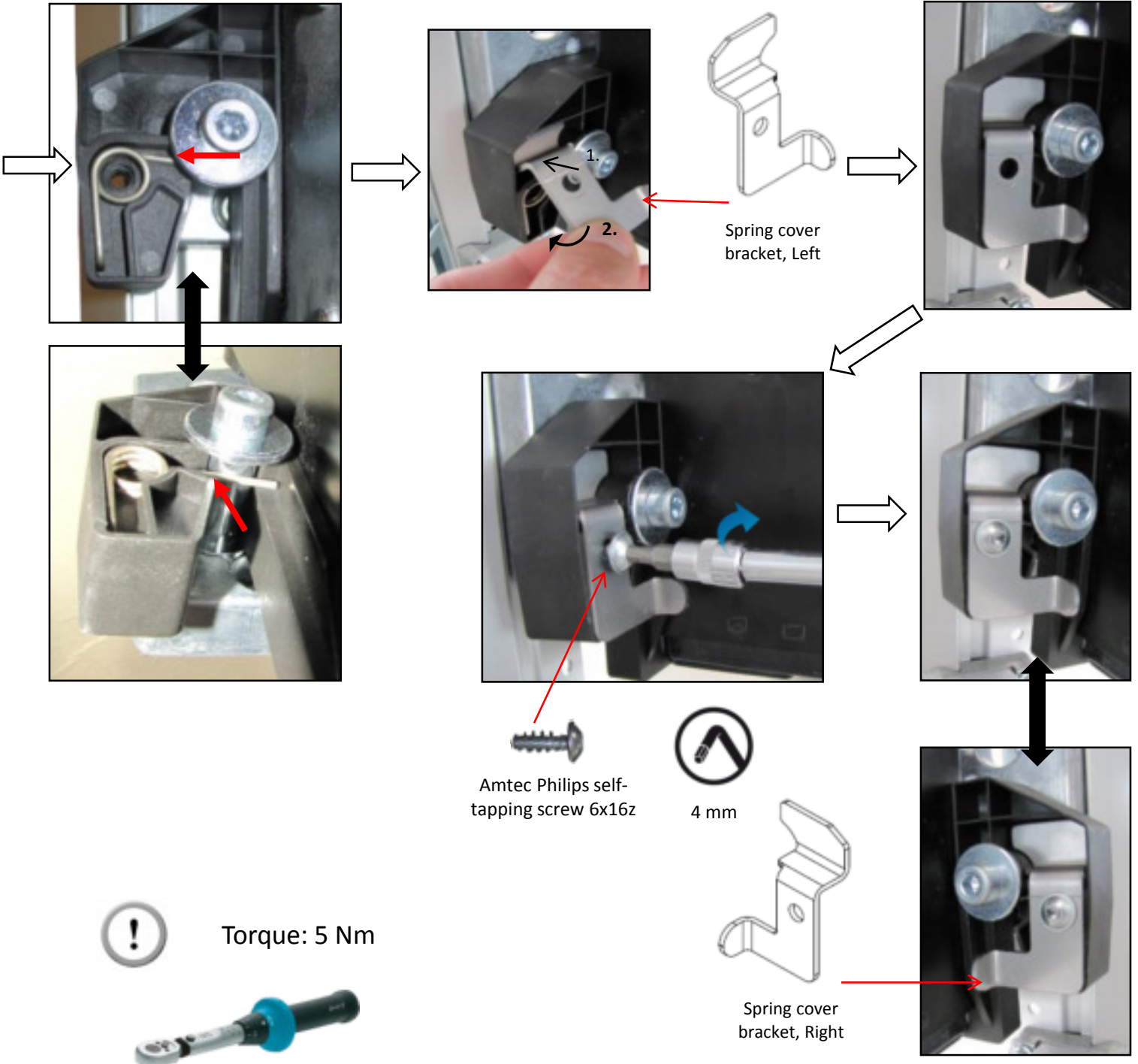
NOTE: Bearing brackets must be fully installed prior to mounting the shelves. For installation of left/right bearing brackets, see page 10.

NOTE: Tilt shelf approx. 45° when inserting onto the bearing brackets.



> Flexx Rack Shelves: Shelf Assembly Cont.

NOTE: The spring cover bracket should be screwed in over the leg spring.



> Clean-up

Be sure to attach the provided Flexx Rack Operating label in clear view

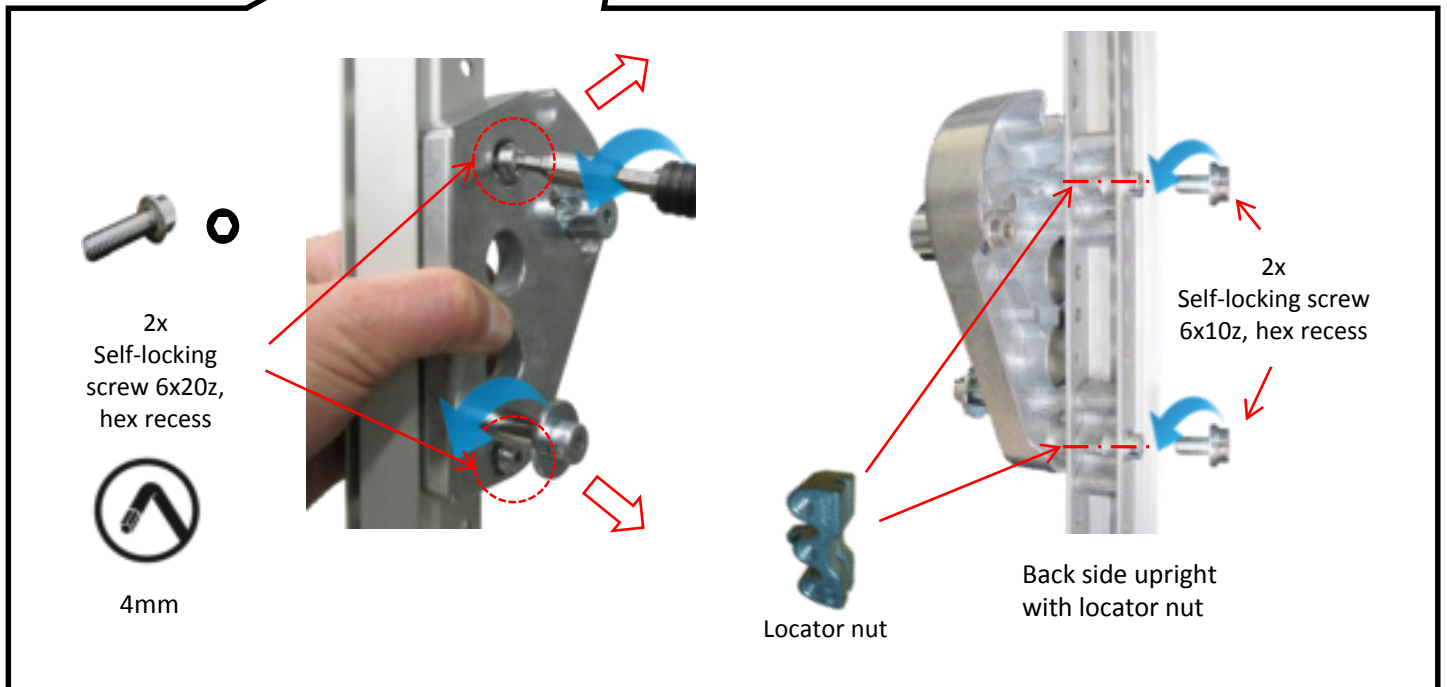
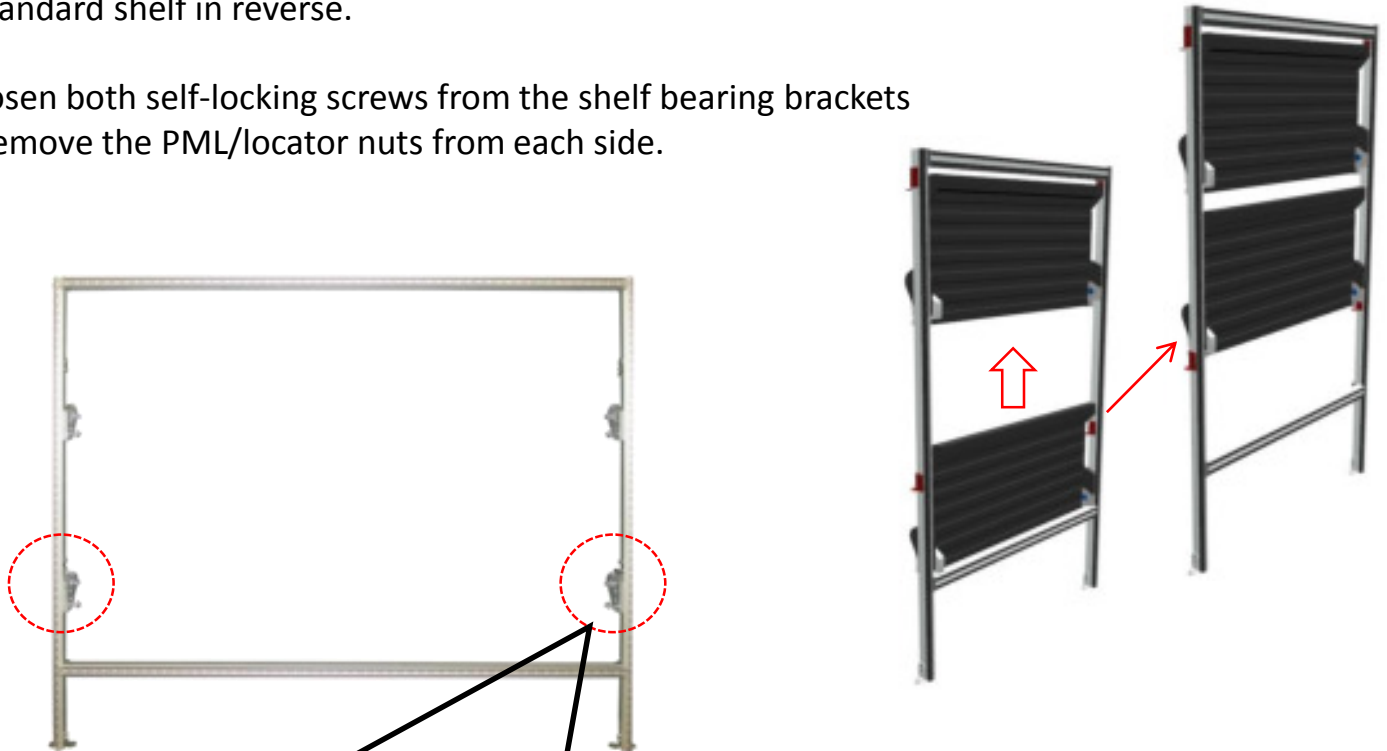


Clean vehicle of any loose debris.



> Shelf Adjustments: Height Adjustment

1. Remove the shelf from the racking assembly. See page 20-21 for installation of the standard shelf in reverse.
2. Loosen both self-locking screws from the shelf bearing brackets and remove the PML/locator nuts from each side.

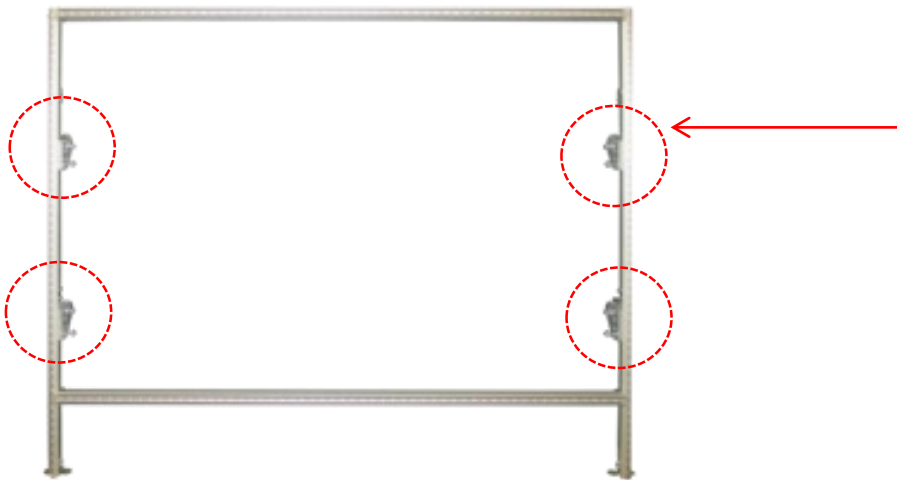


➤ Shelf Adjustments: Height Adjustment Cont.

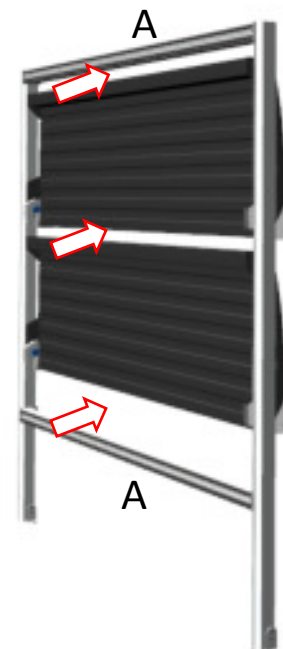
3. Place left and right bearing brackets in the desired position and fasten anew on both sides. Make sure the brackets are positioned at the same grid height.

To reinstall the shelf bearing brackets, follow the steps from the preceding page in reverse.

4. Reinstall shelf – see pages 20-21.



WARNING: Items can get crushed if too little distance is left between shelves. Therefore, the **minimum** distance between closed shelves and frame traverse (**A**) is at least 2 grids (34 mm).

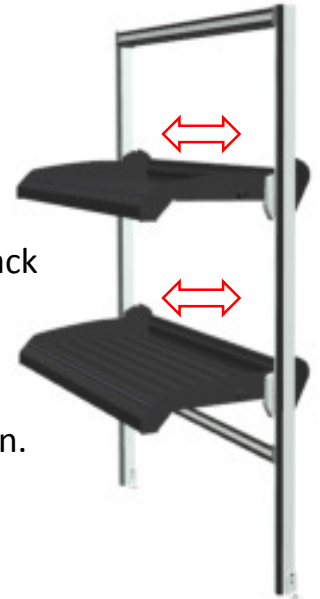


> Shelf Adjustments: Horizontal Adjustment (Moves the shelf towards or away from the vehicle wall)

Horizontal adjustment of the Flexx Rack shelf requires that the locking pin and side bracket be moved.

NOTE: When modifying the horizontal position be sure to set the side bracket and locking pin with identical spacing on both sides of the Flexx Rack shelf.

NOTE: Five (5) positions are possible. Shelves from the factory are assembled with the side brackets and locking pins set in the “max” position.



Shelf removal, see page 25.

The diagram illustrates the process of adjusting the shelf's horizontal position. It includes the following components and instructions:

- Tools:** A cordless drill and a 4 mm hex key are shown on the left. The instruction "Tighten securely" is accompanied by a circular icon with a diagonal line through it.
- Labels:** "Side plate" points to the main shelf structure. "Locking pin" points to the pin on the side plate. "Side bracket right/left" points to the brackets on the shelf's edge.
- Adjustment:** A "max." label with arrows indicates the maximum extension of the shelf. Red arrows show the movement of the side brackets and locking pins.
- Torque:** A torque wrench is shown with the instruction "Torque: 5 Nm".
- Locking Pin Insertion:** Two inset images show a soft-head wrench being used to insert the square end of the locking pin into the square hole on the side plate.

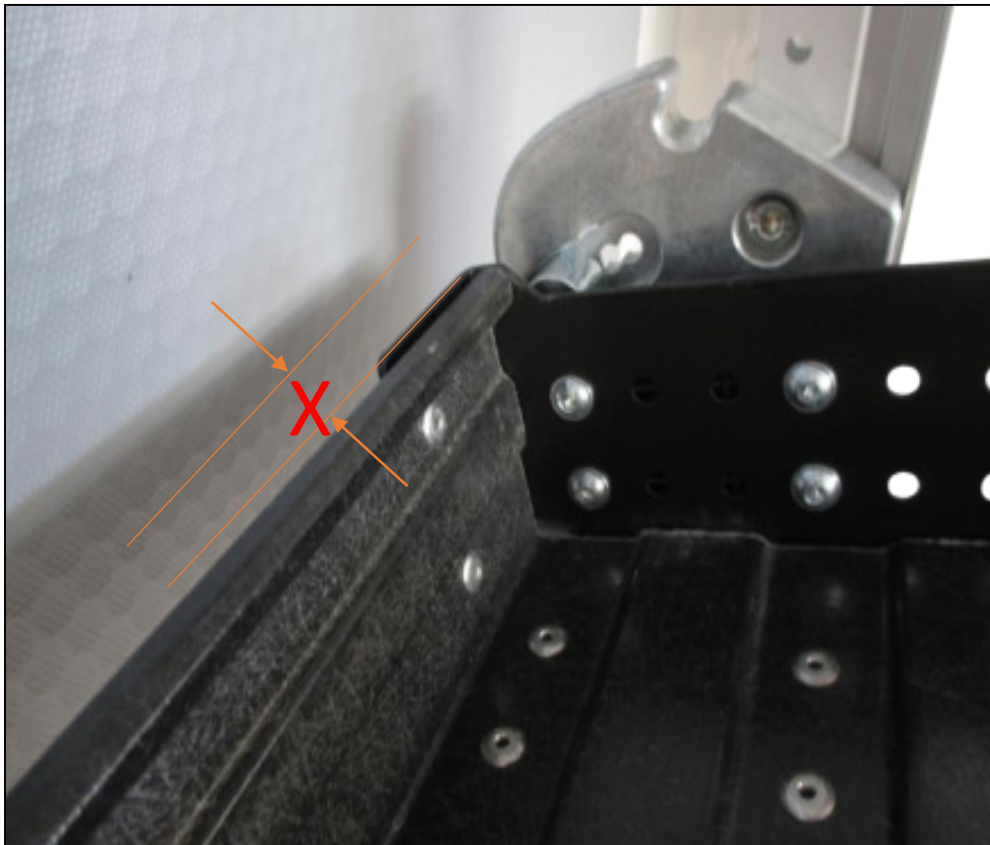
NOTE: The square-end of the locking pin has to be inserted into the square-end of the plate. Hold it with a soft-head wrench. (risk of damage)

> Shelf Adjustments: Horizontal Adjustment Cont.

NOTE: Pay attention to the space between the shelf and vehicle wall. Distance (X) must exceed **0 mm (0")**. Otherwise there is risk of interference preventing proper operation of the shelf.

NOTE: Distances to the wall may vary from vehicle to vehicle. Wheel wells and other vehicle body protrusions, as well as, cladding vs. no cladding may affect the placement of the Flexx Rack.

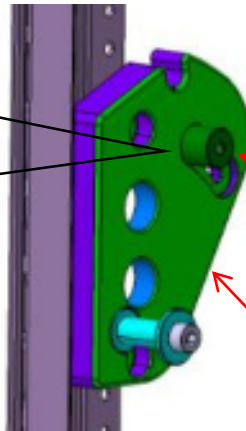
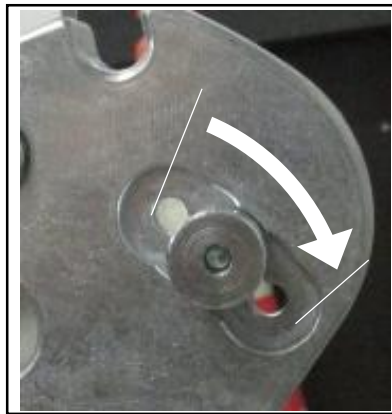
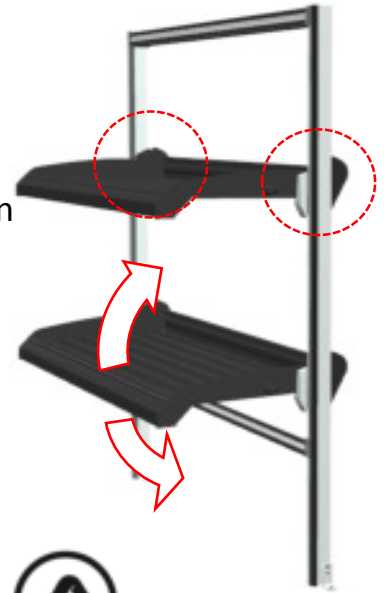
Ideally the backs of the vertical uprights will be no closer than 4" to the wall with the back edge of the shelf no closer than one quarter inch ($\frac{1}{4}$ ").



> Shelf Adjustments: Adjusting Shelf Inclination

As an added prevention against items tipping over the angle of inclination of Flexx Rack shelves may be manually adjusted.

Depending on the vehicle body and customer application the shelves can be adjusted to maintain a horizontal plain or tilted upwards to keep items situated against the rear of the shelf.



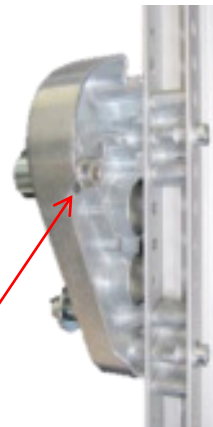
Adjusting pin



Bearing bracket left

Adjustable inclination
(4 pitches, 4° each)

To remove the adjusting pin, loosen the self-locking screw M8x20. Afterwards place the adjusting pin in the desired position and re-tighten securely.



M8x20



8mm



A/F13

!!! Attention !!!

The adjusting pin has to be tightened with a predetermined **torque** of **25Nm**.



> Shelf Adjustments: Adjusting Shelf Inclination Cont.

After moving the adjusting pin to the desired location, glue the screws together with soluble Loctite.



The angle of the uprights can be adjusted at the floor. Refer to page 18 for more details.

