



Universal Carbon Fibre Front Splitter Kit Installation Instructions



IMPORTANT NOTICE: These instructions are for guidance only. It is your responsibility to ensure that installation is undertaken in a safe and appropriate way and in accordance with local law. If you are in any doubt as to your competency to safely install the kit then please consult a professional bodyshop.

Introduction

Congratulations on your purchase of Carbon Mods' Universal Carbon Fibre Front Splitter Kit. This kit is designed to significantly improve the aerodynamics of your vehicle by closing off the underside of the front bumper/spoiler thus smoothing airflow and increasing front downforce.

The splitter is suitable for fitment on almost all road-going cars and this kit includes all necessary parts for the installation. In addition to the content of the kit you will only need reasonable practical skills and standard DIY tools.

Universal Fit

Because of the huge range of OEM and aftermarket front bumpers/spoilers that are on the road, even across one car model, the splitter is provided 'oversized' ready to be easily cut back and shaped to perfectly match your bumper/spoiler regardless of make, model or even aftermarket spoilers.

Kit Contents

Your Universal Carbon Fibre Splitter Kit includes the following parts. If anything is missing please contact your place of purchase:

- Foam-cored carbon fibre splitter panel blank (to be cut to shape)
- 2 stainless steel adjustable tie-bars with articulated fixings
- 2.5m of black PVC edging strip
- 8 x M8 stainless steel bolts, nyloc nuts and washers
- 2 x Carbon Mods badges

Tools you will need to complete the installation:

- Hacksaw blade
- Electric drill
- 8.5mm and 6.5mm drill bits
- Production paper/sanding block
- Tape measure
- Scribe (or sharp object like a nail)
- Superglue
- Allen key
- Car jacks / Axle stands
- Large piece of cardboard (for making a template)

Step by Step Instructions

1. Create cardboard template

The first step is to create an accurate template of your bumper/spoiler that we can use to cut the panel to the right size and shape.



Using a large sheet of cardboard (probably some of the box that the splitter came in), position the cardboard underneath your front bumper and align it so that one edge is at the rear-most point of the front bumper/spoiler.

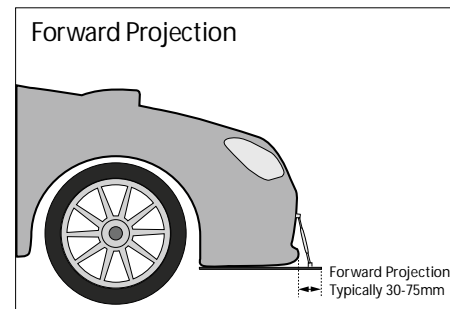


Next, use a pen to carefully draw the profile of the bumper onto the cardboard sheet. Be careful not to allow the cardboard to move, relative to the bumper during this process. Once you're done hold the template in place and check that the line follows the bumper all the way round and that the back of the cardboard still lines up with the back of the bumper.

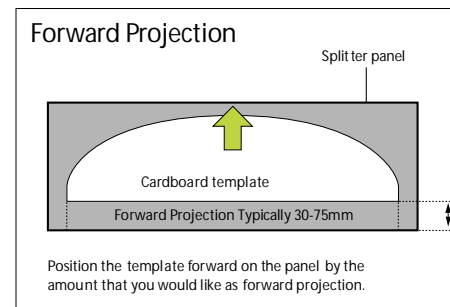
You can now take the template away from the car and use a pair of scissors to cut the cardboard template along the line you drew on it. The result will be a cardboard shape that has the same profile as your bumper.

2. Transfer the template profile to the splitter panel

Put the splitter panel on a clean flat surface.



The next step is to decide how much you want the splitter panel to project forward past the front of your bumper. In most installations, this should be about 40mm but this is entirely down to your taste. Increasing this distance will increase the wind 'splitting' effect of the splitter.



Having decided on the amount of projection you want, you should add this amount to the depth of the splitter you drew on the cardboard template by positioning the cardboard template forward on the splitter panel by this amount.



With the template in place, use a sharp object like a nail or a scribe to transfer the profile to the splitter panel. Scribe straight lines to fill the gap where you have moved the panel forward to allow for the forward projection.

3. Cut the splitter panel

You're now ready to cut the panel to match the profile. If you choose to use a jigsaw to do this, ensure you are using a very fine toothed blade to avoid chipping or fracturing the panel. If you cut the panel by hand you can use a hacksaw blade (intended for metalworking) in a holder or with some tape wrapped around one end to form a handle.



Cut the panel following the line that you scored onto it. Cut slightly outside of the line so that you can rub the cut line smooth.



Once you've cut the panel, use a sanding block (or some 120 grit sandpaper wrapped around a block) to smooth out the cut line just up to and past the line that you scored on (to erase the line).

When you're finished you should have a smooth line that doesn't waiver.

4. Apply edging strip



You should now apply the supplied edging strip to the edge of the panel. This makes the panel look neater and prevents water and dirt from becoming ingrained into the edge of the panel.

The edging strip needs holding in place with a strong adhesive. Superglue or a polyurethane adhesive should be used to hold the strip in place.

5. Jack up the car and position the panel

TIP: If you will be using the adjustable tie-bars in your installation (these are optional), before you complete the next steps, position the panel and offer up the tie-bars to find a suitable mounting point on the splitter. Next, try to work out whether the reverse of the bumper will be accessible once the splitter panel is fitted. If it won't,

you should attach the top fixings for the tie-bars at this stage, before you restrict access to the reverse of the bumper with the splitter panel.



For the next stage you will need to jack up the front of the car at both side.

This will allow you enough room to drill the underside of the splitter and your bumper.

Offer the splitter up to the underside of the bumper and identify the points where the splitter is in solid contact with the bumper. These will be the points where you should drill through the panel and into the bumper.



With luck you should be able to get a couple of G-clamps in place to hold the splitter panel to the bumper. If you can do this it is also helpful to support the splitter in the middle to prevent it from 'sagging' between the two clamp points.

If you can't get clamps on then you'll need the help of at least a couple of people to support the splitter and hold it in position.



With the splitter held firmly in place, using an 8.5mm drill bit, drill through the panel and through the bumper from the underside at the rearmost point (providing the panel makes good contact with the bumper there).



You should then use 2 of the bolts and nyloc nuts with 4 washers to fix the splitter to the panel in these two places.

Use a washer on the inside and the outside to spread the load of the fastener.

You can now proceed around the front bumper adding as many fixings (in the same way) as seem appropriate. If the front bumper is not flat at the bottom then only add fixings in places where the panel contacts the bumper. Adding them in other places will cause the panel to warp.

The vast majority of bumpers are almost flat around the bottom lip and allow for plenty of good fixing points. If your bumper is not and does not offer good fixing points then additional work may be required to make a safe and suitable mounting system. If you are in any doubt, consult a professional bodyshop.

6. Attach the adjustable stainless steel tie-bars at the top

Included in the kit are two adjustable stainless steel tie-bars. The splitter can be installed with or without the use of the tie-bars, but if installed with the tie bars these can provide additional support for the splitter panel, particularly if good fixing points to the bumper were not available at the centre front of the panel. The use of the tie-bars is strongly recommended if you are running more than 50mm of forward projection.

The adjustable nature of the tie bars makes installation simple and articulated fixings mean they can be installed with the tie bars at almost any angle.

Adjust the tie-bars by rotating the centre barrel without rotating the ends. When finding a correct position for the bars, have them set at about 50% of their full extension. This leaves plenty of room to tighten them up after fixing, as required.

Start by finding two suitable mounting points on the front of the bumper where the tie-bars can be fixed. It is important that the back of the spoiler can be reached in this place in order for the washer and nut to be screwed on to the bolt on the other side. If you didn't check this before fitting the splitter, you may need to remove the panel and affix the top brackets for the tie-bars.



Mark the correct position for the top fastenings using a pencil. Check the alignment both vertically and horizontally to ensure the two tie bars will be symmetrical.

Drill through the front bumper in the marked place using an 6.5mm drill bit.



Pass an M6 bolt (with washer fitted) through from the back of the bumper and into the threaded bush at the top of the tie-bar. Tighten the fixing by turning the whole tie-bar and/or tightening the nut from the inside using a hex key.

Repeat to fix the top of the second tie-bar in place.

7. Attach the adjustable stainless steel tie-bars at the bottom



With the tops of the tie-bars in place, align the bottom half of the tie-bar with the panel and put a small mark showing this point. Ensure that both tie-bars are aligned symmetrically.



Using a 6.5mm drill bit drill through the splitter panel at the point you have marked.

Pass an M6 bolt (with washer) through from the under side of the splitter panel into the threaded bush at the bottom of the tie-bar and tighten using a hex key.

Tighten the tie-bars by rotating the centre section until the tie-bars start to just pull the splitter panel tight. Finally, lock the tie-bar at this length by firmly tightening the nuts on the tie-bars' threaded section against the centre section.

8. Check splitter and admire

Once you have completed the fitment of the second tie-bar, all that is left is to check all of the fixings to ensure that there are properly tightened and solid. Give the splitter a good push and pull and ensure that nothing moves at all. If there is any movement, either tighten the fixings further or add additional fixings.

Once you are happy with the installation, clean off the splitter and admire.

SAFETY TIP: From time to time it is a good idea to check the fixing of your splitter to ensure that no movement has occurred or slackening of any of the nuts/bolts.

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The Universal Carbon Fibre Splitter and these instructions were created by Carbon Mods

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About Carbon Mods

Carbon Mods is a small specialist carbon fibre products company operating from premises in Staffordshire, England. All our products are designed, tooled and manufactured on site using high quality carbon, resins and other materials. We design and manufacture niche performance products for motor sports, aerospace and marine applications as well as a range of best-selling kits to introduce people to the world of carbon fibre.