

Catback Exhaust Fitting Guide

This guide is written to help with the fitting of all catback exhausts. It isn't aimed at any specific exhaust and therefore it's most likely that some bits won't be relevant to your requirements, in this event just skip ahead to the next step.

Joint Types

V-Band

These are used usually within motorsport, they are compact and easy to split if required. Especially good where sections of exhaust might require quick removal and replacement. Some are flat faced and others are a male and female design. With the flat-faced design **it is very important that you get the 2 flanges perfectly aligned**, if they are not perfectly aligned when the clamp is tightened they will move inside the clamp and become loose. V-Bands also don't use a gasket so if high-temp RTV silicone* isn't used they usually leak.

*Please ensure the RTV silicone used is specifically for high temperatures!

Slip Joint

A slip joint or a swaged joint is often used on systems that might require a degree of adjustability. When assembling it's recommended to use high-temp RTV silicone to get a good seal and it also helps the tubes slide together. This type of joint has both lateral and rotational adjustability and this means that if it's not assembled correctly it can lead to perceived fitment problems.

To correctly assemble an exhaust with this type of joint you need to first do a test assembly on the car. Once happy with the test assembly, it's time to put the silicone on the joints and slide them together. Now the whole exhaust needs to be supported under the car without using the mounts on the car. 2 or 3 transmission jacks are usually required at this point and on most cars you want to jack up the exhaust until it touches the underside of the car. Once it is in this position, all the clamps can be tightened until they hold the relevant 2 pieces in place. At this point, it's time to lower the exhaust and fix it to the car using the rubber mounts.

This method ensures the exhaust is straight, piecing together without the jacks supporting usually ends up with the exhaust hanging lower than designed and in the shape of a banana...

Flange Joint

Widely used especially by Japanese manufacturers, these are 2 pieces of steel, usually around 10mm thick with a gasket between them and bolts holding them together. When assembling it is recommended to massage the gaskets with high-temp RTV silicone to ensure a good seal and prevent the gasket from blowing. Using the RTV is essential if you are bolting a new flange to an old one where the face of the flange is likely to have corrosion and/or be warped. Always put the nuts on finger tight until you are happy with the fit of the complete system. Only then tighten them up fully.

Clamp Types

T-Bolt

These are our preferred type of clamp along with the V-Band, it's a single nut to tighten them and gives an equal clamping force around the circumference of the pipe.

U-Clamp

Easier to fit than the T-Bolt type because they are put on after the exhaust is together, however, they only squeeze in one direction so they can oval out the pipe and leave a wider gap at the sides.

French

Rarely used in performance exhausts.

V-Band

These are available in standard type and quick release, they clamp the flanges together with a uniform clamping force but must be matched to the flanges you want to clamp.

VAG Group + Porsche

The VAG group cars and Porsche often use a sleeve clamp to join between the downpipe and the catback section. This is made from 2 or 3 layers of steel rolled into each other and then a clamp on either end. These are easy to work with but after several years on a car can be difficult to open back up. When fitting the use of high-temp RTV silicone is recommended.

Hanger Types

Round Bar

The most common way to mount an exhaust is to use round bar, usually either 10mm or 12mm in diameter. The bar goes into rubber mounts that then go to the chassis. These mounts stop the vibration from the exhaust transferring into the car. These can be difficult to get the bar in and out of, so some lubrication is often a good idea. There are tools available specifically for this job. A problem for all exhaust hangers is that they are easily bent during transit, this isn't a big issue, however, because these hangers are easy to bend back and you will often actually want to bend these once the exhaust is on the car to get an accurate fit.

Flat Plate with Hole

The flat plate with a hole for a bolt isn't used that often but we see it used from factories where exhausts need to be held in place with more accuracy than if a round bar mount was used. When we use the flat plate

type mount we usually weld it in such a way that it can be bent into the correct position for the car. This just means that if the car has old exhaust mounts or something under there isn't as it left the factory they can be adjusted to get the required fit.