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## Wheel spacer Selection Guide

### Why do I want/need wheel spacers?

**Aesthetics.** You might want to push the wheels out for a better stance, more aggressive look and to fill the empty wheel arch.

**Clearance.** Many wheels are not directly compatible with big brake kits. You may need to use a spacer to give the calliper enough clearance inside the wheel.

**Offset Correction.** The wheel offset may be too high, resulting in the wheels sitting too far inward. The wheel spacer will effectively reduce the wheel offset making it protrude further from the axle.

**Handling.** By widening the track width of the car you will reduce the weight transfer in cornering. You can gain a similar effect as adding a wider wheel without the added weight and expense.

### What size should I get?

We offer spacers in thicknesses from 5mm to 21mm in most wheel PCDs. The thickness chosen is often personal preference but there are some considerations such as those outlined below and a more in depth description of each consideration is shown in the following paragraphs.

Have you got enough arch clearance?

Will the wheel still seat and locate on the hub centre?

Slip on or hubcentric spacers?

What diameter do I need?

### Have you got enough arch clearance?

This is very straight forward and you can simply measure the clearance between the arch and the outside edge of the tyre taking into account suspension bump travel and also steering of the front wheel. You need to leave some clearance to keep the MOT man happy and also minimise the risk of any damage to the wheel arches from

possible clashing or tyre and arch! The difference in current clearance and clearance desired is roughly the thickness of the spacer that you want.

### Will the wheel still seat and locate on the hub centre?

It is absolutely paramount that the wheel will still locate on the centre of the hub (or on a hubcentric wheel spacer). Locating the wheel on only the studs or nuts **IS NOT SAFE.**

To ensure the wheel is going to locate you need to measure the hub protrusion past the brake disc using a Vernier calliper. Do this on both the front and rear hubs.



Then measure the depth of the chamfer on the inside of the wheel – this is different for many wheels so don't assume these measurements will be the same on your wheels.



The example shown here is for a rear hub. The protrusion past the disc is 14.95mm, wheel chamfer is 6.09mm:

$14.95 - 6.09 = 8.86\text{mm}$  with this measurement the largest slip on wheel spacer you can use before the wheel won't locate any more is 5mm.



### Slip on or hubcentric spacers?

The previous example was to calculate the maximum size of a slip on spacer that you could use. A hubcentric spacer locates on your wheel hub and then has its own built in location for the wheel itself so that you can extend the spacer width to pretty much anything you like.

To use a hubcentric spacer the hub protrusion must be measured, in our example above it's 14.95mm. Our spacers use an overlap of 3mm – this means the minimum spacer width that can be used is the hub protrusion +3mm, so in our example  $14.95+3=17.95$ . We don't make a spacer of 17.95 but you're in luck as we do an 18mm hubcentric spacer!

The inside recess depth of the spacer is always 3mm less than its width so 18mm =15mm inside, 21mm = 18mm inside depth etc. The depth of recess in the rear of the spacer must be greater than the hub protrusion.

Trying to use a 15mm hubcentric spacer on 14.95mm hub protrusion results in the spacer hanging off the hub and not sitting flush with the brake disc mounting face – this **IS VERY DANGEROUS**.



Spacers must have enough back recess so that they sit flush with the brake disc mounting face



### What diameter do I need?

For Renault vehicles with 4x100mm PCD we do 135mm and 150mm diameter spacers. This is done to maximise the wheel locating face area. On the most common vehicle we sell for, the Clio 172 and 182 the rear brake disc has a face of 135mm diameter and the front has 150mm and fit like this:





If you try to fit a 150mm spacer on the back it will overhang the brake and foul on the pads or calliper



On Clio 3 and Megane 2 models both front and rears are 150mm.

On more modern models they have 135mm on the front as well as the rear – if in doubt you can look up your vehicle here and see what diameter the brake bells are before selecting your particular spacer: <https://www.bremboparts.com/europe/en>

You will be able to look up the technical drawing of the disc and see what the bell diameter is – in this case 150mm:

<https://www.bremboparts.com/europe/en/catalogue/renault-clio-ii-bb0-1-2-cb0-1-2-2-0-16v-sport/000017869-1>

### Longer wheel bolts or studs

When fitting wheel spacers you will **ALWAYS** need longer bolts or studs. We sell lengthened wheel bolts suitable for the wheel spacers or studs and nut conversions. If you use longer wheel bolts you must ensure there is enough thread engagement into the hub – this should be as thick as the hub is so the thread is totally engaged – in most cases this will be about 12mm-14mm.

If you use our 75mm long M12 stud kits then you will always have enough thread engagement on the nut with all of our wheel spacer thicknesses. The Clio 3 RS and Megane 2 RS will need the 68mm long studs for spacers up to 10mm and the 83mm for spacers up to 21mm thickness.

### Hub nut caps

Hub nut caps may interfere with the fitting of the wheel spacers. If there is any interference then remove the hub nut cover, fit the wheel spacer and then you can refit the cover to the centre of the wheel spacer if you want to retain it.

**If in any doubt please ask!**

If you get stuck please ring for help and advice.

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