WHEELS & TYRES

EVERYTHING YOU NEED TO KNOW + MORE

If you're looking to buy a new set of wheels - whether it's with intentions of improving appearance, comfort, or performance - you will need a set that fits your van correctly according to particular specification.

YOU MUST BE AWARE...

'How do I choose the right wheels for my needs? What does PCD mean? What offset should I be running and how do I calculate it? What size alloy will work with my suspension? What tyres do I need for my new wheels?'

Our wheel-dedicated blog post will give you everything you need as a van owner to make an educated decision on the most suitable (practically & aesthetically) wheels for your build. Here you'll find the pros & cons of wheel size & width, the tricky-to-grasp offset debate, PCD, and, most importantly, load ratings attached to wheels & tyres alike.

DECISION ONE

ALLOYS OR STEELS?

The first question you should be asking yourself might be...

'What am I using my van for?'

Answering this question may be able to help you decide on whether you need alloy wheels or steels.

OR

- Far lighter than equivalent steel wheels
- Available in a greater variety of designs
- Improved acceleration, handling and braking
- Premium looks
- Carry big name brands
- Typically, larger sizes
- A stronger and more robust option
- Usually carry greater load ratings
- Can be over half the price of alloy wheels
- Utilitarian, rugged looks
- Can suit any application
- Year-round option

DECISION TWO

DIAMETER & WIDTH

Wheel size is perhaps the most deterministic factor when deciding on a set. The two dimensions to be mindful of when browsing our wheels are rim diameter (measured in inches), and rim width (also measured in inches).

In terms of diameter, bigger is usually better. Well, not too big. We, along with many other van owners, have found **20"** to be the sweet spot. That being said, popular sizes range from **17"** to **20"** depending on application.

THE ACTUAL DIAMETER OF A WHEEL IS MEASURED AGAINST THE BARREL

You'll see these displayed in sizes **20-8.5** for example. The **20"** referring to the diameter of the wheel in inches.

THE 'OVERALL' DIAMETER OF A WHEEL IS MEASURED FROM OUTER LIP TO OUTER LIP

This will often be greater than the actual diameter.

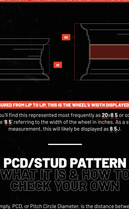
Width is a slightly more important factor than the previously mentioned diameter. This measurement largely determines how the wheel behaves on the road, what size tyres you buy, and the overall rolling resistance of the wheels.

Manufacturers typically don't fit wheels any wider than **7J**. We'll come back to that 'J' later. From a manufacturers point of view, **7J** is more than enough to achieve the desired levels of grip, comfort and support the vehicle requires.

However, we, as van owners, want more. Much like diameter, bigger, in this case wider, is better. We want **8**, **9**, even up to **10J** on some staggered width sets. Let's take a look at how this is measured.

IF, ACTUAL RIM WIDTH = THE TRUE J VALUE OF THE WHEEL (BARREL SECTION)

IE, OVERALL RIM WIDTH = THIS VALUE MAY BE GREATER THAN THE ACTUAL 'J' WIDTH



MEASURED FROM J-P TO J-P. THIS IS THE WHEELS WIDTH DISPLAYED AS J.

Again, you'll find this represented most frequently as **20-8.5** or something similar. The **8.5** referring to the width of the wheel in inches. As a stand-alone measurement, this will likely be displayed as **8.5J**.

PCD/STUD PATTERN

WHAT IT IS & HOW TO CHECK YOUR OWN

Put simply, PCD, or Pitch Circle Diameter, is the distance between the mounting holes on both your hubs and wheels alike. This measurement, unlike size & width, is represented in millimetres. Some of our common PCDs at Vansport are **5-108**, **5-108**, and **5-112**.

NUMBER OF STUDS

5 X 120

PCD DIAMETER IN MILLIMETRES

The first half of this measurement is simple. The **5** represents the number of holes per wheel. The second number, **120**, represents the measurement of the pitch diameter circle. Simple as that. As long as you're on wheels with the same PCD as your van's spec they'll fit like factory.

- See your OE wheel for reference
- Check to see if your manufacturers handbook makes reference to the wheel specs
- Alternatively, check online forums or websites dedicated to changing your OE wheels

HOW TO CHECK YOU PCD

OFFSET OR 'ET'

HOW TO CHECK IT + WHY THE NUMBERS MATTER

Offset, like many other previous points, is an important factor when selecting the right wheels for your van. Put simply, offset (often seen as ET) determines how far in or out the face of your wheel sits in relation to the mounting surface. This is most commonly referred to as 'poke'.

A LOWER POSITIVE OFFSET (LET'S SAY ET35) GIVES MORE POKE THAN A GREATER POSITIVE OFFSET (ET50). 50MM MORE TO BE PRECISE.

That's right, offset is also measured in millimetres.

TYPICALLY, OFFSET CAN BE FOUND STAMPED ON THE BACK OF A SPOKE.

Each of the above wheels share the same width, only the offsets vary. A positive offset places the mounting surface towards the face of the wheel in relation to the centre line, whilst a negative offset places the mounting surface further it towards the rear of the wheel. ET0 is neutral positioning.

CENTRE BORE + SPIGOTS

WHAT TO LOOK OUT FOR IN CHANGING WHEELS

Measured in millimetres, the centre bore of a wheel is designed to fit snugly over the hub on your vehicle. OE wheels almost always match since they are specifically tailored to the vehicle in question. However, since aftermarket wheels aren't vehicle specific, a spigot ring is likely going to be a necessary component to make the wheel fit that hub snugly.

This shouldn't be a worry for you, however. We supply all wheels with the correct spigot ring if required at all. One we see very often is **73.6mm** - **66.1mm**. Quite self-explanatory, this spigot ring adapts your **73.6mm** wheel centre bore to fit the fixed **66.1mm** hub diameter. Get it?

Always use spigots where required! They're vital to a safe fitting wheel.

WHEEL LOAD RATINGS

THE ULTIMATE DECIDING FACTOR. GET IT RIGHT

850KG **850KG**

Load ratings are arguably the most influential factor when selecting new wheels for a commercial vehicle. If they don't meet your axle weights, they can't be installed. Simple as that.

Don't let this get you down, however. We, at Vansyde, pride ourselves on offering a wide variety of hand-picked wheels from some of the world's leading manufacturers, chosen specifically to be up-rated to meet the weightiest of campers. Rest assured, we've got you covered.

NEW POINT LOOKUP FOR VEHICLES AXLE WEIGHT?

Luckily, manufacturers make this really simple to check.

On most vans this can be found on the vehicle plate located in a prominent area, typically in the door jamb or under the bonnet. Let's take a VW for example, it should look a little something like this.

HERE'S HOW A TYPICAL CHASSIS PLATE MIGHT LOOK ON YOUR VAN

The chassis plate contains vital information about your vehicle, including your chassis number as well as some important numbers around your van's towing and carrying capabilities. Let's go through the numbers.

- **2800**kg ..... gives us the vehicle's gross weight. In the Transporter world, this is where we get the **T28** designation.
- **5200**kg ..... resembles the vehicle's gross weight plus the maximum allowed trailer load.
- **01** - **1600**kg ..... gives us the vehicle's front axle weight.
- **02** - **1550**kg ..... gives us the vehicle's rear axle weight.

LET'S TAKE THE LARGEST OF OUR AXLE WEIGHTS. HERE IT'S 1600KG

1600KG / 2 = 800KG

THIS MEANS YOUR NEW WHEELS NEED A LOAD RATING OF AT LEAST 800KG

HOW TO READ

AND MAKE USE OF TYRE WALL NUMBERS

- **275** ..... WIDTH ..... The width of the tyre measured in millimetres. This is largely determined by the actual rim width & can be increased or decreased to achieve perfect tyre fitments.
- **40** ..... PROFILE ..... Tyre profile is, effectively, the depth of the tyre wall. The **40** refers to the ratio of tyre wall to tyre width. Therefore, our tyre above has a tyre wall **40** % of its **275**mm width. **275**x**40** = **110**mm. This gives us a tyre profile of roughly **110**mm.
- **R20** ..... DIAMETER ..... This is the most self-explanatory part of the tyre wall. The **20** simply refers to the actual rim diameter this tyre is designed to fit. Once again, this is measured in inches.
- **106** ..... LOAD ..... Tyre load ratings are usually displayed as **2** or **3** digit numbers. These are axle/ tyre mounted properties that your wheel's load rating. These numbers correspond to load ratings in KG per tyre. See our blog on Tyre Load Ratings.