**Tyre Education Guide: How to Search and Understand Tyres (2W, 3W, 4W)**

**🎯 Introduction**

When it's time to **replace your vehicle's tyre**, whether it’s a **bike, scooter, car, auto-rickshaw, or SUV**, choosing the right tyre is very important for **safety, performance, mileage, and comfort**.

But tyre sizes and technical terms like **width**, **aspect ratio**, **rim size**, and **load index** can be confusing.

👉 This step-by-step guide will help you **understand tyre markings**, know how to **choose the right tyre**, and what each number or letter on your tyre means — in simple language.

**🚗 Step 1: Understand Where to Find Your Tyre Size**

You can find your **tyre size** written on:

* The **sidewall of the existing tyre**
* The **registration certificate (RC book)** of the vehicle
* The **user manual** or **driver’s door sticker (in cars)**

You will see something like:

* For Cars: 195/65 R15
* For Bikes: 100/90-18
* For Auto-Rickshaws: 4.00-8

**🔍 Step 2: Learn to Read Tyre Size (with Example)**

Let’s break down a tyre size code. Take this example:

**195/65 R15 91H**

| **Part** | **Meaning** |
| --- | --- |
| **195** | **Tyre Width** in millimeters (195 mm wide) |
| **65** | **Aspect Ratio** – the tyre’s height is 65% of its width |
| **R** | **Radial Construction** (R = Radial, standard in modern vehicles) |
| **15** | **Rim Diameter** in inches – this tyre fits a 15-inch rim |
| **91** | **Load Index** – maximum weight the tyre can carry (91 = 615 kg approx.) |
| **H** | **Speed Rating** – maximum speed capability (H = up to 210 km/h) |

**🧠 Step 3: Understand Each Tyre Element in Detail**

**1. Tyre Width**

* Measured in **millimeters**.
* Wider tyres = better grip but slightly lower mileage.
* Narrow tyres = better fuel economy but less grip.

**2. Aspect Ratio**

* Given as a **percentage** of the tyre's width.
* Lower ratio (e.g., 55) = low profile, sporty look, better cornering.
* Higher ratio (e.g., 70) = more cushion, better ride comfort.

**3. Rim Diameter**

* Tyre fits only the **rim of the matching diameter**.
* A R15 tyre fits a **15-inch rim** only.

**4. Construction Type**

* R = Radial (common in passenger vehicles)
* – or D = Bias-ply/Diagonal (often in 2W/3W or heavy-duty vehicles)

**5. Load Index**

* A number that tells how much **weight each tyre can carry safely**.
* For example, 91 = 615 kg per tyre.
* Always match or exceed the original load index.

**6. Speed Rating**

* A letter that tells the **maximum safe speed** for the tyre.
* Example:
  + S = up to 180 km/h
  + H = up to 210 km/h
  + T = up to 190 km/h
* Always match or exceed the original rating.

**7. Tubeless or Tube-type**

* **Tubeless Tyres**: Safer and more modern, do not need a separate tube.
* **Tube-type Tyres**: Used in older bikes or commercial vehicles.

**8. Tread Pattern**

* The **design on the tyre surface** that touches the road.
* Types include:
  + **Symmetrical**: Same pattern on both sides — for basic use.
  + **Asymmetrical**: Outer and inner pattern different — better for handling and grip.
  + **Directional**: V-shaped pattern — for high-speed, wet grip.

**🛵 Step 4: Tyre Size Formats for Different Vehicles**

| **Vehicle Type** | **Example Tyre Size** | **Format** | **Special Notes** |
| --- | --- | --- | --- |
| **Two-Wheeler** | 100/90-18 | Width/Aspect-Ratio-Rim | Check if front/rear sizes are different |
| **Three-Wheeler** | 4.00-8 | Width-Rim (in inches) | Bias-ply common, load rating very important |
| **Four-Wheeler** | 195/65 R15 | Width/Aspect-Ratio-Rim | Load and speed index must be suitable |

**🛠️ Step 5: How to Choose the Right Tyre**

1. ✅ **Match the Original Size** (Unless advised otherwise)
2. ✅ **Same or Better Load & Speed Rating**
3. ✅ **Choose Tubeless if Possible**
4. ✅ **Decide Usage**:
   * City driving = comfort & mileage
   * Highway = grip & performance
   * Off-road = high durability & deep tread
5. ✅ **Check Manufacturing Date**:
   * Look for a 4-digit DOT code like 1224 (Week 12, Year 2024)
   * Prefer tyres **not older than 6 months to 1 year**

**❗ Common Mistakes to Avoid**

* ❌ Using the wrong size tyre for the rim
* ❌ Mismatching speed/load rating
* ❌ Installing tyres with very old manufacturing dates
* ❌ Mixing brands and patterns in one vehicle

**✅ Summary for Customers**

* Always **check the tyre size on your old tyre**.
* Understand what **each number means** — Width, Height, Rim.
* Look for tyres that suit your **driving style** and **road conditions**.
* Always ensure the **tyres are fresh, safe, and certified**.