

# GUIDE TO Buying Steel

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## Thinking of buying steel for the first time?

With this step-by-step guide from WinSteel, you'll gain a clearer understanding of the product and make your choice with confidence.

## What You Should Talk About with Your Architect, Structural Engineer, or Contractor



Since steel bars are offered in multiple sizes, it's important to double-check the required size and quantity before purchasing.

#### i. STANDARDS OF STEEL BARS

Be sure to confirm which steel bar standard is required. In Pakistan, the most commonly used standards are:

American Standard ASTM 615 ASTM 706

British Standard BS 4449

Pakistani Standard PS 1879 PS 1612

#### ii. GRADES OF STEEL BARS

The Grade requirement varies from project to project. It denotes the tensile strength of the steel bar, calculated in PSI (pounds per square inch).

**Grade 40** 40,000 PSI minimum

**Grade 60** 60,000 PSI minimum

**Grade 500** 72,500 PSI minimum

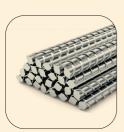


### What to discuss with the retailer before making a purchase?



#### TYPES OF STEEL BARS

Steel bars commonly available in Pakistan:



Produced from steel billets. Deformed Bars are engineered for construction and meet the most recent ASTM (American), BS (British), and PS (Pakistani) standards.

**Deformed Bars** 



These bars originate from steel plates of dismantled ships and are cold-twisted manually to achieve their strength.

**TOR Bars** 

Where Durability



#### **BRAND & AUTHENTICITY**

Always confirm the brand to avoid counterfeit steel products.

- Check the steel bar for the manufacturer's name along its length to avoid counterfeit products.
- Verify genuine product markings on the manufacturer's website before making a purchase.
- Request brand literature or brochures from the seller at the time of purchase.



#### **WEIGHT CHECK**

Make sure the steel bars are accurately weighed at loading and delivery—either personally or through a certified third-party weighbridge. Cross-checking the weight ensures you receive the exact quantity you are paying for. Even small discrepancies can add up to significant losses in large projects. Always keep a copy of the weighment slip for your records and future reference.





### iv.

#### **FLEXIBILITY**

High-quality rebars are designed to be flexible and resilient. A simple on-site test can help check their elasticity: lift a single bar from one end of the bundle and then release it. If the bar is of good quality, it will spring back close to its original straight position. In contrast, low-quality bars will remain bent, indicating poor strength and durability.



#### **RIB PATTERN**

A uniform and well-defined rib pattern along the entire length of the steel bar is a strong indicator of quality. Consistent ribs improve grip and create a stronger bond with concrete, which enhances the overall durability and structural strength of the construction. Irregular or shallow ribs can reduce adhesion, compromising safety and performance. Always inspect the rib pattern carefully to ensure you're using high-quality steel for your project.





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