



# C6x8.2 Steel Channel Explained: Dimensions, Meaning, Properties, and Applications

This guide provides a detailed explanation of the [C6x8.2 steel channel](#), a widely used structural steel shape in construction, fabrication, and industrial applications.

## 1. Understanding the C6x8.2 Designation

The term C6x8.2 follows standard structural steel naming conventions. The letter **C** indicates a steel channel shape. The number **6** represents the nominal depth of the channel in inches, and **8.2** refers to the approximate weight of the channel in pounds per linear foot. This naming system helps engineers and fabricators quickly identify size and weight characteristics.

## 2. Dimensions and Section Characteristics

A C6x8.2 steel channel typically has a depth of approximately 6 inches, with specific flange widths, web thickness, and flange thickness defined by structural standards. These dimensions determine the channel's strength, stiffness, and load-carrying capacity in structural applications.

## 3. Material and Structural Properties

C6x8.2 channels are commonly manufactured from carbon steel such as A36 or equivalent structural grades. These materials provide a balance of strength, weldability, and durability, making the channel suitable for both permanent structures and custom fabrication projects.

## 4. Common Applications

The C6x8.2 steel channel is used in a wide range of applications including building frames, equipment supports, trailer frames, platforms, bracing systems, and general steel fabrication. Its moderate weight and depth make it ideal for projects that require structural reliability without excessive mass.

## 5. Why the C6x8.2 Channel Is Popular

Engineers and builders frequently choose the C6x8.2 channel because it offers predictable performance, easy availability, and versatility across multiple industries. Its standardized dimensions allow for accurate planning, efficient installation, and consistent results.

This explanation is intended for engineers, contractors, students, and anyone seeking a clear understanding of the [C6x8.2 steel](#) channel and how it is used in real-world structural design.