



Cold Drawn Steel Bright Bars for Automotive Engine Components – Crankshafts, Camshafts & Connecting Rods

Description

The **automotive industry** demands high-precision, high-strength materials for engine components to ensure **efficiency, durability, and performance**. **Cold drawn steel bright bars** play a critical role in manufacturing **crankshafts, camshafts, and connecting rods**, which are essential for the smooth operation of internal combustion engines.

At **Steelmet Industries**, we supply **precision-engineered bright bars** that meet **automotive industry standards**, ensuring **high fatigue strength, wear resistance, and dimensional accuracy**.

Why Cold Drawn Bright Bars for Engine Components?

Cold drawing improves the **mechanical properties** of steel, making it **stronger, more wear-resistant, and dimensionally accurate**—key attributes for engine parts subjected to extreme stresses.

1. Crankshafts

Crankshafts convert linear piston motion into rotational motion to drive the vehicle. They must withstand **high torsional and bending stresses**.

– **Advantages of cold drawn steel bright bars for crankshafts:**

- **Enhanced fatigue strength** to handle repeated load cycles
- **Superior surface finish** for reduced friction and wear
- **High machinability** for precise bearing surface tolerances

Common Steel Grades Used:

- **42CrMo4 (AISI 4140) / EN19** Excellent strength and wear resistance
- **C45 / AISI 1045** Medium carbon steel with good toughness
- **EN8 / AISI 080M40** Cost-effective option with moderate strength

2. Camshafts

Camshafts control the timing of the intake and exhaust valves in an engine. They require **high wear resistance and dimensional precision**.

Advantages of bright bars for camshafts:

- **High hardness and wear resistance** for prolonged service life
- **Precision tolerance** for smooth movement and efficient engine timing
- **Consistency in quality** for reduced machining and grinding time

Common Steel Grades Used:

- **EN36 (AISI 9310)** Case-hardening steel for high surface hardness
- **EN24 (AISI 4340)** High-strength alloy steel for heavy-duty camshafts
- **16MnCr5** Used for case-hardening applications

3. Connecting Rods

Connecting rods transfer the force from the piston to the crankshaft, converting reciprocating motion into rotary motion. They must be **lightweight yet strong enough to withstand cyclic loading**.

Advantages of bright bars for connecting rods:

- **High tensile strength** to endure high dynamic forces

- **Fatigue resistance** for prolonged engine life
- **Excellent impact resistance** for high-performance applications

Common Steel Grades Used:

- **C70 (AISI 1070)** High carbon steel with excellent strength
- **EN24 (AISI 4340)** High-performance alloy steel
- **EN15 (AISI 3115)** Superior impact resistance

Cost Savings & Performance Benefits

Using **high-quality cold drawn bright bars** reduces machining time, material wastage, and tool wear. The precise tolerances mean **less post-processing**, resulting in **lower production costs**.

Automotive manufacturers rely on **Steelmet Industries** for:

- **Consistent quality** for mass production
- **Superior mechanical properties** for long-lasting components
- **Custom sizes and grades** tailored to specific needs

Explore our range of high-quality steel bright bars for automotive applications:

www.steelmet.in

Categories

1. Posts

Tags

1. Alloy Steel Bars
2. Automotive Industry
3. Automotive Manufacturing
4. Camshafts
5. Cold Drawn Steel Bright Bars
6. Connecting Rods
7. Crankshafts
8. Engine Components
9. High-Strength Steel
10. Machinable Steel
11. Precision Steel Bars
12. Steel for Automotive

- 13. Steel Grades for Automotive
- 14. Steelmet Industries
- 15. Wear Resistant Steel

Date

01/05/2026

Auteur

admin

Steelmet Industries - Bright Bars, Alloy Steels, Free Cutting Steels, Stainless Steels