



## 2. Industrial Shafts for Power Transmission

- **Lathe machine shafts** – Used for **rotary motion and cutting stability**
- **Gear shafts** – Transmit power in industrial gear systems
- **High-speed drive shafts** – Essential for **automated industrial machinery**

### Best-Suited Steel Grades for Spindles and Shafts

Unlike hydraulic cylinder rods, which prioritize corrosion resistance and impact strength, **machine tool spindles and shafts require steels optimized for hardness, wear resistance, and precision machining.**

• **EN31 (AISI 52100, 100Cr6)** – High-carbon chromium steel, widely used for **high-speed spindles and shafts** due to its **exceptional wear resistance and hardness.**

• **EN47 (50CrV4, AISI 6150)** – Chromium-vanadium steel, excellent for **shock resistance**, commonly used in **high-stress spindle applications.**

• **EN24 (40CrNiMo6, AISI 4340)** – High-strength alloy steel with **superior fatigue resistance**, ideal for **high-load shafts and spindles.**

• **EN8 (C45, AISI 1045)** – Medium-carbon steel used for **general-purpose machine shafts** requiring moderate strength and machinability.

• **EN36 (16NiCr4, AISI 9310)** – Case-hardening steel, used where **a tough core and a hardened wear-resistant surface** are needed.

### Why Choose Steelmet Industries?

• **Precision-engineered steel bright bars** for industrial applications

• **Excellent surface finish** for reduced friction and heat buildup

• **Custom sizes and heat-treated options** for specific machinery needs

• **Reliable performance for high-speed and high-load applications**

• For high-precision steel bright bars, visit [www.steelmet.in](http://www.steelmet.in).

• **Applications:**

1. Posts

• **Key Applications:**

1. CNC spindles
2. gear shafts
3. high-speed spindles
4. industrial shafts
5. lathe machine shafts

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6. machine tool spindles
  7. power transmission shafts
  8. Precision Steel Bars
  9. à¤¸, à¤¸•à¤¸? à¤¸? à¤¸² à¤¸-à¤¸•à¤¸° à¤¸³/à¤¸? à¤¸? à¤¸-à¤¸³/à¤¸° (Steel Bright Bar)
  10. cold drawn steel

**Date**

06/04/2026

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admin

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