



# Unlocking Efficiency: Why a Hollow Linear Shaft is a Game-Changer in Motion Systems!

**ShanDong, China 19th May 2026** - At a time when industries are demanding lighter, faster, and more energy-efficient mechanical solutions, Shandong Baokun Metal Material Co., Ltd. proudly announces the latest advancements in Hollow Linear Shaft technology—redefining efficiency and potential in motion and automation systems. According to Ms Sun, spokesperson for the company, the [Hollow Linear Shaft](#) is rapidly becoming the motion component of choice for engineers and designers seeking to raise the bar in high-performance, precision-driven environments.

As automation transforms every sector—from robotics and packaging to automotive systems and factory automation—the need for sophisticated motion components has never been greater. Yet, while most focus on motors, controllers, and drives, the unsung hero ensuring smooth, consistent, and reliable motion is the shaft itself. Now, with the rise of Hollow Linear Shaft solutions, organizations around the world are discovering transformative benefits not only in efficiency but also in cost, weight, customizability, and system design freedom.

 **BAOKUN METAL**  
SHANDONG BAOKUN METAL MATERIAL CO., LTD.

## **HOLLOW LINEAR SHAFT**

Unlocking Efficiency: Why a Hollow Linear Shaft is a Game-Changer in Motion Systems!

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**The Evolution of Linear Motion: Why Hollow Linear Shafts?**

Linear motion systems power vast aspects of modern life. From assembly lines to 3D printers, hospital labs to semiconductor manufacturing, the quest for smoother, longer-lasting, and more accurate linear motion underpins innovation. Traditionally, these systems have relied on solid linear shafts, offering strength and stability. However, as applications grow in complexity and expectations shift toward “doing more with less,” the solid shaft is no longer always optimal.

Enter the [Hollow Linear Shaft](#)—an elegant response to the growing demand for efficiency. “A Hollow Linear Shaft represents a leap forward not just in component technology, but in system-level thinking,” explains Ms Sun. “By removing unnecessary material from the core, we retain robust surface function while unlocking a remarkable series of advantages for motion system engineers.”

“Anywhere you see linear movement, a Hollow Linear Shaft may be the game-changer engineers have been waiting for,” affirms Ms Sun.

### **Key Benefits of Hollow Linear Shaft Technology:**

#### **1. Lower Moving Mass = Higher Energy Efficiency**

Electrical and pneumatic actuators can now move the same loads faster, using less energy—an essential factor in both sustainability initiatives and high-speed automation.

#### **2. Improved Dynamic Performance**

Systems with reduced inertia respond more quickly to control inputs, improve accuracy, and exhibit less vibration and overshoot, improving both process quality and throughput.

#### **3. System Integration and Space Optimization**

The hollow core is ideal for integrating air lines, sensor wiring, or lubricating fluid, reducing the overall size and complexity of assembly lines or custom machines.

#### **4. Lean Manufacturing and Cost Control**

By reducing material use and system weight, organizations cut not only procurement and transport costs but also infrastructure wear and tear, driving long-term savings.

#### **5. Sustainability and Green Manufacturing**

“Less steel means a smaller carbon footprint,” Ms Sun emphasizes, “A small feature like a [Hollow Linear Shaft](#) contributes to a significant step toward sustainable automation.”

**About Shandong Baokun Metal Material Co., Ltd.**

Founded in Jinan, China, [Shandong Baokun Metal Material Co. Ltd.](http://www.sdbksteel.com) is a leading global supplier of specialty metal solutions for precision engineering applications. With expertise in cold-drawn, honed, and induction-hardened tubes and shafts, Baokun is committed to quality, innovation, and customer success across industrial automation, motion control, automotive, food processing, laboratory, and medical equipment sectors.



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## Frequently Asked Questions

### Q1: How does strength compare to a solid shaft?

A: For most applications, the wall thickness of a Hollow Linear Shaft gives it comparable bending strength and rigidity to a solid shaft.

### Q2: Can I retrofit existing systems with hollow shafts?

A: In most cases, yes. As ODs are standardized, swapping is straightforward. Some bearing recalibration or support review may be advisable for very high-speed applications.

### Q3: Are there limits to the inner diameter size?

A: Baokun provides many sizes—from small bores for wiring up to large cores for pneumatic or hydraulic integration. Custom ID sizes can be manufactured on request.

### Q4: What shaft materials are available?

A: Popular options are GCr15 (bearing steel), 9Cr18 (stainless steel), SUS304/316, and variants depending on corrosion, hardness, and magnetic requirements.

**Q5: How is the Hollow Linear Shaft protected against corrosion?**

A: Standard options include hard chrome plating or stainless steel construction; alternative finishes are available for extreme environments.

**More info about the company**

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